

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION 4

IN THE MATTER OF:
Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina

Parties:
Respondents Listed in
Appendix A

Settling Federal Agencies Listed In
Appendix B

ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON
CONSENT FOR SUPPLEMENTAL
REMEDIAL INVESTIGATION/FOCUSED
FEASIBILITY STUDY

U.S. EPA Region 4
CERCLA Docket No. CERCLA-04-2014-3753

Proceeding Under Sections 104, 107 and
122 of the Comprehensive Environmental
Response, Compensation, and Liability Act,
42 U.S.C. §§ 9604, 9607 and 9622.

**SUPPLEMENTAL REMEDIAL INVESTIGATION AND FOCUSED FEASIBILITY
STUDY ADMINISTRATIVE SETTLEMENT AGREEMENT AND
ORDER ON CONSENT**



10946407

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ADMINISTRATIVE SETTLEMENT AGREEMENT AND ORDER ON CONSENT
FOR SUPPLEMENTAL REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY

OPERABLE UNIT NO. 2

I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("EPA"), the Respondents listed in Appendix A ("Respondents"), and the Settling Federal Agencies listed in Appendix B ("Settling Federal Agencies"). The Settlement Agreement concerns the preparation and performance of a supplemental remedial investigation and focused feasibility study ("RI/FS") for Operable Unit Two ("OU2") at or in connection with the Ward Transformer Superfund Site ("Site"), including portions of the Raleigh Durham International Airport, located along Mount Herman Road in a predominantly industrial area of Raleigh, Wake County, North Carolina. The Settlement Agreement also concerns payment by the Respondents of EPA's Future Response Costs related to the RI/FS and the Settling Federal Agencies' payment of response costs incurred by the Respondents in connection with the RI/FS.

2. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9604, 9607, and 9622 ("CERCLA"). This authority was delegated to the Administrator of EPA on January 23, 1987, by Executive Order 12580, 52 Fed. Reg. 2926 (Jan. 29, 1987), and further delegated to Regional Administrators on May 11, 1994, by EPA Delegation Nos. 14-14-C and 14-14-D. The authority to enter into the Settlement Agreement for the preparation and performance of the RI/FS was further redelegated by the Regional Administrator of EPA Region 4 through the Director of the Superfund Division, through the Deputy Director of the Superfund Division, to the Chiefs of the Federal Facilities Branch, Emergency Response and Removal Branch, Superfund Remedial and Site Evaluation Branch, Superfund Remedial Branch, Superfund Support Branch and Superfund Enforcement and Information Management Branch by EPA Regional Delegation No. 14-14-C.

3. In accordance with Sections 104(b)(2) and 122(j)(1) of CERCLA, 42 U.S.C. §§ 9604(b)(2) and 9622(j)(1), EPA notified the U.S. Department of Interior, the National Oceanic and Atmospheric Administration, and the North Carolina Department of Environment and Natural Resources ("NCDENR") on July 10, 2012, of negotiations with PRPs regarding the release of hazardous substances that may have resulted in injury to the natural resources under Federal and/or State trusteeship.

4. EPA, Respondents and Settling Federal Agencies recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondents and the payments made by Settling Federal Agencies in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondents and Settling Federal Agencies do not admit, and retain the right to controvert in any subsequent proceedings other than proceedings to

implement or enforce this Settlement Agreement, the validity of the findings of fact in Section V and the conclusions of law and determinations in Section VI. Respondents and the Settling Federal Agencies agree to comply with and be bound by the terms of this Settlement Agreement and further agree that they will not contest the basis or validity of this Settlement Agreement or its terms.

II. PARTIES BOUND

5. This Settlement Agreement applies to and is binding upon EPA, Settling Federal Agencies, and Respondents and their successors and assigns. Any change in ownership or corporate status of a Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter such Respondent's responsibilities under this Settlement Agreement.

6. Respondents are jointly and severally liable for carrying out all activities required by this Settlement Agreement. In the event of the insolvency or other failure of any one or more Respondents to implement the requirements of this Settlement Agreement, the remaining Respondents shall complete all such requirements.

7. Respondents shall ensure that their contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement. Respondents shall be responsible for any noncompliance with this Settlement Agreement.

8. Each undersigned representative of the Parties certifies that he or she is fully authorized to enter into the terms and conditions of this Settlement Agreement and to execute and legally bind Respondents to this Settlement Agreement.

III. STATEMENT OF PURPOSE

9. In entering into this Settlement Agreement, the objectives of EPA, Settling Federal Agencies, and Respondents are: (a) to determine the nature and extent of contamination and any threat to the public health, welfare, or the environment caused by the release or threatened release of hazardous substances, pollutants, or contaminants at or from OU2 by conducting a supplemental RI as more specifically set forth in the Statement of Work ("SOW") attached as Appendix D to this Settlement Agreement; (b) to identify and evaluate remedial alternatives to prevent, mitigate, or otherwise respond to or remedy any release or threatened release of hazardous substances, pollutants, or contaminants at or from OU2 by conducting a focused FS as more specifically set forth in the SOW in Appendix D to this Settlement Agreement; and (c) to recover response and oversight costs incurred by Respondents and EPA with respect to this Settlement Agreement.

10. The Work conducted under this Settlement Agreement is subject to approval by EPA and shall provide all appropriate and necessary information to assess OU2 conditions and evaluate alternatives to the extent necessary to select a remedy that will be consistent with CERCLA and the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R.

Part 300 ("NCP"). Respondents shall conduct all Work under this Settlement Agreement in compliance with CERCLA, the NCP, and all applicable EPA guidances, policies, and procedures.

IV. DEFINITIONS

11. Unless otherwise expressly provided in this Settlement Agreement, terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or in such regulations. Whenever terms listed below are used in this Settlement Agreement or its appendices, the following definitions shall apply:

"CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-9675.

"DOJ" shall mean the United States Department of Justice and its successor departments, agencies, or instrumentalities.

"Day" or "day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or federal or state holiday, the period shall run until the close of business of the next working day.

"Effective Date" shall mean the effective date of this Settlement Agreement as provided in Section XXIX.

"EPA" shall mean the United States Environmental Protection Agency and its successor departments, agencies, or instrumentalities.

"EPA Hazardous Substance Superfund" shall mean the Hazardous Substance Superfund established by the Internal Revenue Code, 26 U.S.C. § 9507.

"Engineering Controls" shall mean constructed containment barriers or systems that control one or more of the following: downward migration, infiltration, or seepage of surface runoff or rain; or natural leaching migration of contaminants through the subsurface over time. Examples include caps, engineered bottom barriers, immobilization processes, and vertical barriers.

"Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports, and other deliverables pursuant to this Settlement Agreement, in overseeing implementation of the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to, payroll costs, contractor costs, travel costs, laboratory costs, the costs incurred pursuant to Paragraph 54 (including, but not limited to, costs and attorneys fees and any monies paid to secure access, including, but not limited to, the amount of just compensation), Paragraph 40

(Emergency Response), and Paragraph 86 (Work Takeover). Future Response Costs shall also include Agency for Toxic Substances and Disease Registry ("ATSDR") costs regarding the Site.

"Institutional controls" shall mean non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements, and well drilling prohibitions.

"Interest" shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.

"NCDENR" shall mean the North Carolina Department of Environment and Natural Resources and any successor departments or agencies of the State.

"NCP" shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 C.F.R. Part 300, and any amendments thereto.

"Operable Unit One" or "OU1" shall mean the portions of the Site downgradient from the Ward Transformer plant and includes Reaches B, C, and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and lower Crabtree Creek.

"Operable Unit Two" or "OU2" shall mean the portions of the Site consisting of the former Ward Transformer plant, certain properties surrounding the plant, and nearby drainage pathways upgradient of Reach B, including Reach A, and generally shown on Appendix C-2 attached hereto.

"Paragraph" shall mean a portion of this Settlement Agreement identified by an Arabic numeral or an upper or lower case letter.

"Parties" shall mean EPA, Settling Federal Agencies and Respondents.

"RCRA" shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, 42 U.S.C. §§ 6901-6992.

"Reach A" shall mean the section of the unnamed tributary to Little Brier Creek that starts at the former Ward Transformer storm water treatment plant outfall, continues west-southwesterly for approximately 2,100 feet (0.4 mile), and terminates at the first culvert beneath the first I-540 crossing.

"Reach B" shall mean the section of the unnamed tributary to Little Brier Creek, downstream of the Ward Transformer plant, starting at the exit of the culvert on the west side of I-540, continuing west-southwesterly for approximately 1,500 feet (0.3 mile), and terminating at the culvert beneath the Lumley Road crossing.

"Reach C" shall mean the section of the unnamed tributary to Little Brier Creek that starts from the terminus of Reach B, continues south-southwesterly for approximately 2,100 feet (0.4 mile) to its confluence with Little Brier Creek proper, and terminates at the culvert beneath the second I-540 crossing.

"Reach D" shall mean the section of Little Brier Creek that starts at the exit of the culvert beneath the second I-540 crossing (the terminus of Reach C) and continues southerly for approximately 4,200 feet (0.8 mile) to its mouth at Brier Creek Reservoir, located in the vicinity of the culverts beneath the Globe Road crossing.

"Respondents" shall mean those Parties identified in Appendix A.

"Respondents' Response Costs" shall mean all costs incurred in performance of the Work, consistent with the National Contingency Plan, and shall include the payment of EPA's Future Response Costs, but shall exclude any payment of penalties by Respondents, including, but not limited to, any payment of penalties under Section XVI.

"RI/FS" shall mean the supplemental remedial investigation and focused feasibility study described herein and in the attached SOW.

"Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral.

"Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent, the SOW, all appendices attached hereto (listed in Section XXVII) and all documents incorporated by reference into this document, including without limitation, EPA-approved submissions. EPA-approved submissions (other than progress reports) are incorporated into and become a part of the Settlement Agreement upon approval by EPA. In the event of conflict between this Settlement Agreement and any appendix or other incorporated documents, this Settlement Agreement shall control.

"Settling Federal Agencies" shall mean those parties identified in Appendix B and their successor departments, agencies, or instrumentalities.

"Site" shall mean the Ward Transformer Superfund Site, located along Mount Herman Road in a predominantly industrial area of Raleigh, Wake County, North Carolina, as generally depicted on the map attached hereto as Appendix C. The Site includes the former Ward Transformer plant and surrounding properties and areas downstream from the plant, including portions of the Raleigh Durham International Airport; unnamed tributaries to Little Brier Creek

(Reach A, B, and C); Little Brier Creek ("Reach D"); Brier Creek Reservoir; Brier Creek; Lake Crabtree; and lower Crabtree Creek; and encompasses the areal extent of contamination therefrom. The Site includes both OU1 and OU2.

"Ward Transformer Superfund Site Special Account" shall mean the special account, within the EPA Hazardous Substance Superfund, established for the Site by EPA pursuant to Section 122(b)(3) of CERCLA, 42 U.S.C. § 9622(b)(3), and the Administrative Settlement Agreement and Order on Consent for Removal, U.S. EPA Docket No. CERCLA-04-2005-3778, dated September 16, 2005.

"State" shall mean the State of North Carolina.

"Statement of Work" or "SOW" shall mean the Statement of Work for development of a RI/FS for OU2, as set forth in Appendix D to this Settlement Agreement. The Statement of Work is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement, as are any modifications made thereto in accordance with this Settlement Agreement.

"United States" shall mean the United States of America and each department, agency, and instrumentality of the United States, including EPA and Settling Federal Agencies.

"Waste Material" shall mean (a) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (b) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (c) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (d) any "hazardous waste" under N.C.G.S.A. § 130A-290(a)(8).

"Work" shall mean all activities Respondents are required to perform under this Settlement Agreement, except those required by Section XIV (Retention of Records).

V. FINDINGS OF FACT

12. The Site, including portions of the Raleigh Durham International Airport, is located along Mount Herman Road in a predominantly industrial area of Raleigh, Wake County, North Carolina. The Site includes the former Ward Transformer plant and surrounding properties and areas downstream from the plant, including unnamed tributaries to Little Brier Creek ("Reach A, B, and C"); Little Brier Creek ("Reach D"); Brier Creek Reservoir; Brier Creek; Lake Crabtree; and lower Crabtree Creek, and encompasses the areal extent of contamination therefrom. Operable Unit One ("OU1") shall mean the areas downgradient from the Ward Transformer plant and includes Reaches B, C, and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and lower Crabtree Creek. OU2 shall mean the portions of the Site consisting of the former Ward Transformer plant, certain properties surrounding the plant, and nearby drainage pathways upgradient of Reach B, including Reach A.

13. The Ward Transformer plant was built on approximately 11 acres of previously undeveloped land ("Ward Property") in 1964. Ward Transformer Company, Inc. ("Ward

Transformer”) is the former operator and current and former owner of the Ward Property. Ward Transformer conducted operations from 1964 until 1997, when Ward Transformer Sales and Service, Inc. (“Ward Sales”) became operator. Ward Sales continued the same operations until 2006, when all operations ceased at the plant. While operating, the companies manufactured, repaired, reconditioned, rebuilt, purchased, and sold transformers, capacitors, switchgear, and other similar types of electrical equipment;

14. During Ward Transformer’s and Ward Sales’ operation of the plant, polychlorinated biphenyls (“PCBs”) were released into the environment from transformers, transformer parts, and transformer oil. PCB contamination was found in the soil at the Ward Transformer plant and adjacent properties, in sediment in the plant’s former storm water lagoon, and in the sediments along the surface water pathway draining the plant. PCBs were also found in sediment samples collected in Reaches A, B, C, and D; Brier Creek Reservoir; Brier Creek; and the beginning of Lake Crabtree. In addition, site contaminants were detected in aquatic biota (fish and crayfish) tissue collected in Reaches B, C, and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; Crabtree Creek; and the Neuse River;

15. In 2004, EPA completed a Site-wide Remedial Investigation (Revision 2) for the Site, performed a removal assessment, and issued an Enforcement Action Memorandum memorializing EPA’s decision to implement a time-critical removal action at the portion of the Site described herein as OU2. In 2005, EPA entered into an Administrative Settlement Agreement and Order on Consent for Removal (“AOC”) with nine potentially responsible parties for the performance of the time-critical removal action and the reimbursement of EPA’s response costs. In 2007, EPA completed a Remedial Investigation and Feasibility Study for OU1 at the Site and in 2008, EPA issued a Record of Decision (“ROD”) memorializing the remedial action selected by EPA for OU1. In 2011, after unsuccessful attempts to negotiate a consent decree, EPA issued a Unilateral Administrative Order to 23 potentially responsible parties to perform the remedial design and remedial action (“RD/RA”) selected in the ROD for OU1. The time-critical removal action in the area defined as OU2 and the RD/RA for OU1 are currently on-going;

16. The Site was proposed for inclusion on the National Priorities List (“NPL”) pursuant to CERCLA Section 105, 42 U.S.C. § 9605, on September 5, 2002 (67 Fed. Reg. 56794). The Site was finalized on the NPL on April 30, 2003;

17. In early 2006, as required by the 2005 AOC, Respondents conducted a supplemental site characterization study to better define the extent of PCB soil contamination at the part of the Site described above as OU2. The results of the study are contained in a report that was submitted to and approved by EPA;

18. In 2006, Ward Transformer and Ward Sales ceased all operations at the Ward property and advised Respondents and EPA that they did not have the resources to maintain the plant’s surface water containment and treatment system on a long term basis. Since the Ward entities ceased operations, the Removal Action included an assessment of the contaminant levels in the buildings at the Ward property. To achieve the one (1) part per million (“ppm”) PCB cleanup

standard thereby applicable to all areas encompassed by OU2 and required by the Enforcement Action Memorandum, the Ward Transformer building, the Horizon building, and the Ward stormwater treatment building were demolished and disposed of and approximately 440,000 tons of PCB contaminated soil were excavated and either treated on the Ward property through a Low Temperature Thermal Desorption unit or disposed of offsite. The treated soil, approximately 320,000 tons, was placed on the Ward property and then covered with clean offsite borrow soil and vegetated. The Removal Action work is continuing on an adjacent property and in a drainage course on property owned by the Raleigh Durham International Airport;

19. In the course of performing the Phase I Removal Action, thousands of soil samples were collected and analyzed for PCBs to determine the limits of excavation and to confirm the 1 ppm PCB cleanup standard was achieved throughout the Phase I Removal Action area, except in small areas at the top of bedrock where excavation refusal occurred and measured PCBs above 1 ppm were left in place. In June 2012, Respondents submitted to EPA the Phase I Removal Action Completion Report. That Report includes the sampling and analytical data collected during the performance of the Phase I Removal Action. The Phase I Removal Action has been conducted consistent with 40 C.F.R. §300.415(d); and

20. Respondents are companies that may have arranged for the disposal or treatment of hazardous substances at the Ward plant on the Site.

VI. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth in Section V, EPA has determined that:

21. The Ward Transformer Superfund Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).

22. The PCBs found at the Site, as identified in the Findings of Fact above, are "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).

23. The conditions described in the Findings of Fact in Section V above constitute an actual and/or threatened "release" of a hazardous substance from the facility as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

24. Each Respondent and Settling Federal Agency is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).

25. Respondents and certain Settling Federal Agencies may be responsible parties under Sections 104, 107, and 122 of CERCLA, 42 U.S.C. §§ 9604, 9607, and 9622.

a. Each Respondent may be a responsible party under Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and may be jointly and severally liable for performance of response action and for response costs incurred and to be incurred at the Site.

b. Respondents and certain Settling Federal Agencies may have arranged for disposal or treatment, or may have arranged with a transporter for transport for disposal or treatment of hazardous substances at the facility, within the meaning of Section 107(a)(3) of CERCLA, 42 U.S.C. § 9607(a)(3).

26. The actions required by this Settlement Agreement are necessary to protect the public health, welfare, or the environment, are in the public interest, 42 U.S.C. § 9622(a), are consistent with CERCLA and the NCP, 42 U.S.C. §§ 9604(a)(1), 9622(a), and will expedite effective remedial action and minimize litigation, 42 U.S.C. § 9622(a).

27. EPA has determined that Respondents are qualified to conduct the RI/FS within the meaning of Section 104(a) of CERCLA, 42 U.S.C. § 9604(a), and will carry out the Work properly and promptly, in accordance with Sections 104(a) and 122(a) of CERCLA, 42 U.S.C. §§ 9604(a) and 9622(a), if Respondents comply with the terms of this Settlement Agreement.

VII. SETTLEMENT AGREEMENT AND ORDER

28. Based upon the foregoing Findings of Fact and Conclusions of Law and Determinations, it is hereby Ordered and Agreed that Respondents and Settling Federal Agencies shall comply with all provisions of this Settlement Agreement, including, but not limited to, all appendices to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VIII. DESIGNATION OF CONTRACTORS AND PROJECT COORDINATORS

29. Selection of Contractors, Personnel. All Work performed under this Settlement Agreement shall be under the direction and supervision of qualified personnel. Within 30 days after the Effective Date, and before the Work outlined below begins, Respondents shall notify EPA in writing of the names, titles, and qualifications of the personnel, including contractors, subcontractors, consultants, and laboratories to be used in carrying out such Work. With respect to any proposed contractor, Respondents shall demonstrate that the proposed contractor has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995, or most recent version), by submitting a copy of the proposed contractor's Quality Management Plan ("QMP"). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)," (EPA/240/B-01/002, March 2001; Reissued May 2006) or equivalent documentation as determined by EPA. The qualifications of the persons undertaking the Work for Respondents shall be subject to EPA's review, for verification that such persons meet minimum technical background and experience requirements. This Settlement Agreement is contingent on Respondents' demonstration to EPA's satisfaction that Respondents are qualified to perform properly and promptly the actions set forth in this Settlement Agreement. If EPA disapproves in writing of any person's technical qualifications, Respondents shall notify EPA of the identity and qualifications of the replacements within 30 days after the

written notice. If EPA subsequently disapproves of the replacement, EPA reserves the right to terminate this Settlement Agreement and to conduct a complete RI/FS, and to seek reimbursement for costs and penalties from Respondents. During the course of the RI/FS, Respondents shall notify EPA in writing of any changes or additions in the personnel used to carry out such Work, providing their names, titles, and qualifications. EPA shall have the same right to disapprove changes and additions to personnel as it has hereunder regarding the initial notification.

30. Within 30 days after the Effective Date, Respondents shall designate a Project Coordinator who shall be responsible for administration of all actions by Respondents required by this Settlement Agreement and shall submit to EPA the designated Project Coordinator's name, address, telephone number, and qualifications. To the greatest extent possible, the Project Coordinator shall be present on Site on OU2 or readily available during Site Work. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondents shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 15 days following EPA's disapproval. Respondents shall have the right to change their Project Coordinator, subject to EPA's right to disapprove. Respondents shall notify EPA 15 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notification. Receipt by Respondents' Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondents.

31. EPA has designated Hilary Thornton of the Superfund Remedial and Site Evaluation Branch, Region 4 as its Project Coordinator. EPA will notify Respondents of a change of its designated Project Coordinator. Except as otherwise provided in this Settlement Agreement, Respondents shall direct all submissions required by this Settlement Agreement to the Project Coordinator at 61 Forsyth Street, SW, Atlanta, Georgia 30303.

32. EPA's Project Coordinator shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and On-Scene Coordinator ("OSC") by the NCP. In addition, EPA's Project Coordinator shall have the authority consistent with the NCP, to halt any Work required by this Settlement Agreement, and to take any necessary response action when s/he determines that conditions at the Site may present an immediate endangerment to public health or welfare or the environment. The absence of the EPA Project Coordinator from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.

33. EPA shall arrange for a qualified person ("Oversight Assistant") to assist in its oversight and review of the conduct of the RI/FS, as required by Section 104(a) of CERCLA, 42 U.S.C. § 9604(a). Such person shall have the authority to observe Work and make inquiries in the absence of EPA, but not to modify the RI/FS Work Plan.

IX. WORK TO BE PERFORMED

34. EPA acknowledges that Respondents have completed some of the tasks required by this Settlement Agreement and that Respondents have available some of the data and information required by this Settlement Agreement. This previous work may be used to meet some of the requirements of this Settlement Agreement, upon submission to and formal approval by EPA. Taking into consideration the information obtained during the 2004 RI and during the work conducted in performing the Removal Action, including the data contained in the 2006 Supplemental Site Characterization Report and the June 2012 Phase I Removal Action Completion Report for OU2, and the fact that OU1 at the Site is being separately addressed based on a remedial investigation/feasibility study and ROD for OU1, Respondents shall conduct the RI/FS in accordance with the provisions of this Settlement Agreement, the SOW, CERCLA, the NCP, and EPA guidance, including, but not limited to the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" ("RI/FS Guidance") (OSWER Directive # 9355.3-01, October 1988 or subsequently issued guidance), "Guidance for Data Useability in Risk Assessment" (OSWER Directive #9285.7-09A, April 1992 or subsequently issued guidance), and guidance referenced therein, and guidances referenced in the SOW, as may be amended or modified by EPA. The RI shall consist of collecting such additional data as may be necessary to complete the characterization of current OU2 conditions, determining the nature and extent of any PCB contamination remaining at OU2, assessing any current and future risks to human health and the environment, and conducting treatability testing, as necessary, to evaluate the potential performance and cost of the treatment technologies that are being considered for OU2. The FS shall determine and evaluate (based on treatability testing, where appropriate) alternatives for remedial action, including the no action alternative, to prevent, mitigate, or otherwise respond to or remedy the release or threatened release of any remaining hazardous substances, pollutants, or contaminants at or from OU2. The alternatives evaluated must include, but shall not be limited to, the range of alternatives described in the NCP, and shall include remedial actions that utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable. In evaluating the alternatives, Respondents shall address the factors required to be taken into account by Section 121 of CERCLA, 42 U.S.C. § 9621, and Section 300.430(e) of the NCP, 40 C.F.R. § 300.430(e). The scope of the RI and FS shall be consistent with the provision in 40 C.F.R. § 300.415(g). Upon request by EPA, Respondents shall submit in electronic form all portions of any plan, report, or other deliverable Respondents are required to submit pursuant to the provisions of this Settlement Agreement.

35. Upon receipt of the draft FS report, EPA will evaluate the estimates of the risk to the public and environment that exist upon completion of the Removal Action, and, as necessary, those that are expected to remain after a particular remedial alternative has been completed and will evaluate the durability, reliability, and effectiveness of any proposed Institutional Controls.

36. Modification of the RI/FS Work Plan.

a. If at any time during the RI/FS process, Respondents identify a need for additional data, Respondents shall submit a memorandum documenting the need for additional

data to the EPA Project Coordinator within 15 days after identification. EPA in its discretion will determine whether the additional data will be collected by Respondents and whether it will be incorporated into plans, reports, and other deliverables.

b. In the event of unanticipated or changed circumstances at OU2, Respondents shall notify the EPA Project Coordinator by telephone within 24 hours of discovery of the unanticipated or changed circumstances. In the event that EPA determines that the unanticipated or changed circumstances warrant changes in the RI/FS Work Plan, EPA shall modify or amend the RI/FS Work Plan in writing accordingly. Respondents shall perform the RI/FS Work Plan as modified or amended.

c. EPA may determine that in addition to tasks defined in the initially approved RI/FS Work Plan, other additional Work may be necessary to accomplish the objectives of the RI/FS. Respondents agree to perform these response actions in addition to those required by the initially approved RI/FS Work Plan, including any approved modifications, if EPA determines that such actions are necessary for a complete RI/FS.

d. Respondents shall confirm their willingness to perform the additional Work in writing to EPA within 7 days after receipt of the EPA request. If Respondents object to any modification determined by EPA to be necessary pursuant to this Paragraph, Respondents may seek dispute resolution pursuant to Section XV (Dispute Resolution). The SOW and/or RI/FS Work Plan shall be modified in accordance with the final resolution of the dispute.

e. Respondents shall complete the additional Work according to the standards, specifications, and schedule set forth or approved by EPA in a written modification to the RI/FS Work Plan or written RI/FS Work Plan supplement. EPA reserves the right to conduct the Work itself at any point, to seek reimbursement from Respondents, and/or to seek any other appropriate relief.

f. Nothing in this Paragraph shall be construed to limit EPA's authority to require performance of further response actions at the Site.

37. Off-Site Shipment of Waste Material.

a. Respondents may ship Waste Material from OU2 to an off-Site facility only if they verify, prior to any shipment, that the off-Site facility is operating in compliance with the requirements of Section 121(d)(3) of CERCLA, 42C.U.S.C. § 9621(d)(3), and 40 C.F.R. § 300.440, by obtaining a determination from EPA that the proposed receiving facility is operating in compliance with 42C.U.S.C. § 9621(d)(3) and 40 C.F.R. § 300.440.

b. Respondents may ship Waste Material from OU2 to an out-of-state waste management facility only if, prior to any shipment, they provide written notice to the appropriate state environmental official in the receiving facility's state and to the EPA Project Coordinator. This notice requirement shall not apply to any off-Site shipments when the total quantity of all

such shipments will not exceed ten cubic yards. The written notice shall include the following information, if available: (1) the name and location of the receiving facility; (2) the type and quantity of Waste Material to be shipped; (3) the schedule for the shipment; and (4) the method of transportation. Respondents also shall notify the state environmental official referenced above and the EPA Project Coordinator of any major changes in the shipment plan, such as a decision to ship the Waste Material to a different out-of-state facility. Respondents shall provide the written notice after the award of the contract for the remedial investigation and feasibility study and before the Waste Material is shipped.

38. Meetings. Respondents shall make presentations at, and participate in, meetings at the request of EPA during the initiation, conduct, and completion of the RI/FS. In addition to discussion of the technical aspects of the RI/FS, topics will include anticipated problems or new issues. Meetings will be scheduled at EPA's discretion.

39. Progress Reports. In addition to the plans, reports, and other deliverables set forth in this Settlement Agreement, Respondents shall provide to EPA monthly progress reports by the 10th day of the following month. At a minimum, with respect to the preceding month, these progress reports shall (a) describe the actions that have been taken to comply with this Settlement Agreement during that month, (b) include all results of sampling and tests and all other data received by Respondents, (c) describe Work planned for the next two months with schedules relating such Work to the overall project schedule for RI/FS completion, and (d) describe all problems encountered and any anticipated problems, any actual or anticipated delays, and solutions developed and implemented to address any actual or anticipated problems or delays.

40. Emergency Response and Notification of Releases.

a. In the event of any action or occurrence during performance of the Work that causes or threatens a release of Waste Material from OU2 that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondents shall immediately take all appropriate action. Respondents shall take these actions in accordance with all applicable provisions of this Settlement Agreement, including, but not limited to, the Health and Safety Plan, in order to prevent, abate, or minimize such release or endangerment caused or threatened by the release. Respondents shall also immediately notify the EPA Project Coordinator or, in the event of his/her unavailability, the OSC or the Regional Duty Officer at (404) 562-8700 of the incident or OU2 conditions. In the event that Respondents fail to take appropriate response action as required by this Paragraph, and EPA takes such action instead, Respondents shall reimburse EPA all costs of the response action not inconsistent with the NCP pursuant to Section XVIII (Payment of Response Costs).

b. In addition, in the event of any new release of a hazardous substance from OU2, Respondents shall immediately notify the EPA Project Coordinator, the OSC, or Regional Duty Officer at (404) 562-8700 and the National Response Center at (800) 424-8802. Respondents shall submit a written report to EPA within seven (7) days after each such release, setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment

caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and Section 304 of the Emergency Planning and Community Right-To-Know Act of 1986, 42 U.S.C. § 11004.

X. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

41. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Settlement Agreement, in a notice to Respondents EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondents modify the submission; or (e) any combination of the above. However, EPA shall not modify a submission without first providing Respondents at least one notice of deficiency and an opportunity to cure within 30 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.

42. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Paragraph 41.a, .b, .c, or .e, Respondents shall proceed to take any action required by the plan, report, or other deliverable, as approved or modified by EPA subject only to their right to invoke the Dispute Resolution procedures set forth in Section XV (Dispute Resolution) with respect to the modifications or conditions made by EPA. Following EPA approval or modification of a submission or portion thereof, Respondents shall not thereafter alter or amend such submission or portion thereof unless directed by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Paragraph 41.c and the submission had a material defect, EPA retains the right to seek stipulated penalties, as provided in Section XVI (Stipulated Penalties).

43. Resubmission.

a. Upon receipt of a notice of disapproval, Respondents shall, within 30 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XVI, shall accrue during the 30-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 44 and 45, respectively.

b. Notwithstanding the receipt of a notice of disapproval, Respondents shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondents of any liability for stipulated penalties under Section XVI (Stipulated Penalties).

c. Respondents shall not proceed with any activities or tasks dependent on the following deliverables until receiving EPA approval, approval on condition, or modification of such deliverables: RI/FS Work Plan and Sampling and Analysis Plan; Health and Safety Plan; Draft Remedial Investigation Report; Treatability Testing Work Plan, Treatability Testing Sampling and Analysis Plan, and Treatability Testing Health and Safety Plan, if Treatability Testing is determined necessary; and Draft Feasibility Study Report. While awaiting EPA approval, approval on condition, or modification of these deliverables, Respondents shall proceed with all other tasks and activities that may be conducted independently of these deliverables, in accordance with the schedule set forth under this Settlement Agreement.

d. For all remaining deliverables not listed above in Paragraph 43.c., Respondents shall proceed with all subsequent tasks, activities, and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondents from proceeding further, either temporarily or permanently, on any task, activity or deliverable at any point during the RI/FS.

44. If EPA disapproves a resubmitted plan, report, or other deliverable, or portion thereof, EPA may again direct Respondents to correct the deficiencies. EPA shall also retain the right to modify or develop the plan, report, or other deliverable. Respondents shall implement any such plan, report, or deliverable as corrected, modified, or developed by EPA, subject only to Respondents' right to invoke the procedures set forth in Section XV (Dispute Resolution).

45. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect, Respondents shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately unless Respondents invoke the dispute resolution procedures in accordance with Section XV (Dispute Resolution) and EPA's action is revoked or substantially modified pursuant to a Dispute Resolution decision issued by EPA or superceded by an agreement reached pursuant to that Section. The provisions of Section XV (Dispute Resolution) and Section XVI (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is not otherwise revoked, substantially modified, or superceded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XV, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVI.

46. In the event that EPA takes over some of the tasks, but not the preparation of the RI Report or the FS Report, Respondents shall incorporate and integrate information supplied by EPA into the final reports.

47. All plans, reports, and other deliverables submitted to EPA under this Settlement Agreement shall, upon approval or modification by EPA, be incorporated into and enforceable under this Settlement Agreement. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and enforceable under this Settlement Agreement.

48. Neither failure of EPA to expressly approve or disapprove of Respondents' submissions within a specified time period, nor the absence of comments, shall be construed as approval by EPA. Whether or not EPA gives express approval for Respondents' deliverables, Respondents are responsible for preparing deliverables acceptable to EPA.

XI. QUALITY ASSURANCE, SAMPLING, AND ACCESS TO INFORMATION

49. Quality Assurance. Respondents shall assure that Work performed, samples taken, and analyses conducted conform to the requirements of the SOW, the QAPP, and guidances identified therein. Respondents will assure that field personnel used by Respondents are properly trained in the use of field equipment and in chain of custody procedures. Respondents shall only use laboratories that have a documented quality system that complies with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001; Reissued May 2006) or equivalent documentation as determined by EPA.

50. Sampling.

a. All results of sampling, tests, modeling, or other data (including raw data) generated by Respondents, or on Respondents' behalf, during the period that this Settlement Agreement is effective, shall be submitted to EPA in the next monthly progress report as described in Paragraph 39. EPA will make available to Respondents validated data generated by EPA unless it is exempt from disclosure by any federal or state law or regulation.

b. Respondents shall verbally notify EPA and the State at least 15 days prior to conducting significant field events as described in the SOW, RI/FS Work Plan, or Sampling and Analysis Plan. At EPA's verbal or written request, or the request of EPA's Oversight Assistant, Respondents shall allow split or duplicate samples to be taken by EPA (and its authorized representatives) or the State of any samples collected in implementing this Settlement Agreement. All split samples of Respondents shall be analyzed by the methods identified in the QAPP.

51. Access to Information.

a. Upon request, and except for reports, data and other information previously provided by Respondents to EPA and the State to comply with the AOC, Respondents shall provide to EPA and the State copies of all records, reports, documents, and other information (including records, reports, documents, and other information in electronic form) (hereinafter referred to as "Records") within their possession or control or that of their contractors or agents relating to activities at OU2 or to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records, manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Upon request, Respondents shall also make available to EPA and the State, for purposes of investigation, information gathering, or testimony, their employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

b. Respondents may assert business confidentiality claims covering part or all of the Records submitted to EPA and the State under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Records determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies Records when they are submitted to EPA and the State, or if EPA has notified Respondents that the Records are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such Records without further notice to Respondents. Respondents shall segregate and clearly identify all Records submitted under this Settlement Agreement for which Respondents assert business confidentiality claims.

c. Respondents may assert that certain Records are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondents assert such a privilege in lieu of providing Records, they shall provide EPA and the State with the following: (i) the title of the Record; (ii) the date of the Record; (iii) the name, title, affiliation (e.g., company or firm), and address of the author of the Record; (iv) the name and title of each addressee and recipient; (v) a description of the contents of the Record; and (vi) the privilege asserted by Respondents. However, no Records created or generated to fulfill the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged or confidential.

d. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other Records evidencing conditions at or around OU2.

52. In entering into this Settlement Agreement, Respondents waive any objections to any data gathered, generated, or evaluated by EPA, the State or Respondents in the performance or oversight of the Work that has been verified according to the quality assurance/quality control ("QA/QC") procedures required by the Settlement Agreement or any EPA-approved RI/FS Work Plans or Sampling and Analysis Plans. If Respondents object to any other data relating to the RI/FS, Respondents shall submit to EPA a report that specifically identifies and explains its objections, describes the acceptable uses of the data, if any, and identifies any limitations to the use of the data. The report must be submitted to EPA within 15 days after the monthly progress report containing the data.

XII. SITE ACCESS

53. If OU2 or any other property where access is needed to implement this Settlement Agreement is owned or controlled by any of Respondents, such Respondents shall, commencing on the Effective Date, provide EPA, the State, and their representatives, including contractors, with access at all reasonable times to OU2, or such other property, for the purpose of conducting any activity related to this Settlement Agreement.

54. Where any action under this Settlement Agreement is to be performed in areas owned by or in possession of someone other than Respondents, Respondents shall use their best efforts to obtain all necessary access agreements within 60 days after the Effective Date, or as otherwise specified in writing by the EPA Project Coordinator. Respondents shall immediately notify EPA if after using their best efforts they are unable to obtain such agreements. For purposes of this Paragraph, "best efforts" includes the payment of reasonable sums of money in consideration of access. Respondents shall describe in writing their efforts to obtain access. If Respondents cannot obtain access agreements, EPA may either (a) obtain access for Respondents or assist Respondents in gaining access, to the extent necessary to effectuate the response actions described in this Settlement Agreement, using such means as EPA deems appropriate; (b) perform those tasks or activities with EPA contractors; or (c) terminate the Settlement Agreement. Respondents shall reimburse EPA for all costs and attorney's fees incurred by the United States in obtaining such access, in accordance with the procedures in Section XVIII (Payment of Response Costs). If EPA performs those tasks or activities with EPA contractors and does not terminate the Settlement Agreement, Respondents shall perform all other tasks or activities not requiring access to that property, and shall reimburse EPA for all costs incurred in performing such tasks or activities. Respondents shall integrate the results of any such tasks or activities undertaken by EPA into its plans, reports, and other deliverables.

55. Notwithstanding any provision of this Settlement Agreement, EPA and the State retain all of their access authorities and rights, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.

XIII. COMPLIANCE WITH OTHER LAWS

56. Respondents shall comply with all applicable state and federal laws and regulations when performing the RI/FS. No local, state, or federal permit shall be required for any portion of any action conducted entirely on-site, including studies, if the action is selected and carried out in compliance with Section 121 of CERCLA, 42 U.S.C. § 9621. Where any portion of the Work is to be conducted off-Site and requires a federal or state permit or approval, Respondents shall submit timely and complete applications and take all other actions necessary to obtain and to comply with all such permits or approvals. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XIV. RETENTION OF RECORDS

57. During the pendency of this Settlement Agreement and for a minimum of 10 years after issuance of a no further remedial action determination or commencement of construction of any remedial action, each Respondent shall preserve and retain all non-identical copies of Records (including Records in electronic form) now in its possession or control or that come into its possession or control that relate in any manner to the performance of the Work, regardless of any corporate retention policy to the contrary. Until 10 years after issuance of a no further remedial action determination or commencement of construction of any remedial action, Respondents shall

also instruct their contractors and agents to preserve all Records of whatever kind, nature, or description relating to performance of the Work.

58. At the conclusion of this document retention period, Respondents shall notify EPA at least 90 days prior to the destruction of any such Records, and, upon request by EPA, Respondents shall deliver any such Records to EPA. Respondents may assert that certain Records are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondents assert such a privilege, they shall provide EPA with the following: (a) the title of the Record; (b) the date of the Record; (c) the name and title of the author of the Record; (d) the name and title of each addressee and recipient; (e) a description of the subject of the Record; and (f) the privilege asserted by Respondents. However, no Records created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged or confidential.

59. Each Respondent hereby certifies individually that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any Records (other than identical copies) relating to its potential liability regarding the Site since the earlier of notification of potential liability by EPA or the filing of suit against it regarding the Site and that it has fully complied with any and all EPA and State requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), Section 3007 of RCRA, 42 U.S.C. § 6927, and state law.

60. The United States acknowledges that each Federal Settling Agency (1) is subject to all applicable federal record retention laws, regulations, and policies; and (2) has certified that it has fully complied with any and all EPA requests for information regarding the Site pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XV. DISPUTE RESOLUTION

61. Unless otherwise expressly provided for in this Settlement Agreement, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.

62. If Respondents object to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, they shall notify EPA in writing of their objection(s) within 10 days after such action, unless the objection(s) has/have been resolved informally. EPA and Respondents shall have 14 days from EPA's receipt of Respondents' written objection(s) to resolve the dispute (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA. Such extension may be granted verbally but must be confirmed in writing.

63. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by the Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Superfund Division Director level or higher will issue a written decision. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondents' obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondents shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs, and regardless of whether Respondents agree with the decision.

XVI. STIPULATED PENALTIES AGAINST RESPONDENTS

64. Respondents shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 65 and 66 for failure to comply with any of the requirements of this Settlement Agreement specified below unless excused under Section XVII (Force Majeure). "Compliance" by Respondents shall include completion of the Work under this Settlement Agreement or any activities contemplated under any RI/FS Work Plan or other plan approved under this Settlement Agreement identified below, in accordance with all applicable requirements of law, this Settlement Agreement, the SOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by and approved under this Settlement Agreement.

65. Stipulated Penalty Amounts - Work (Including Payments).

a. The following stipulated penalties shall accrue per day for any noncompliance identified in Paragraph 65.b:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 1,250	1 st through 14 th day
\$ 2,500	15 th through 30 th day
\$ 5,000	31 st day and beyond

b. Compliance Milestones

(i) Failure to timely submit payment of the undisputed portion of any Future Response Costs as provided in Section XVIII of this Settlement Agreement.

(ii) Failure to timely establish an escrow account in the event of a dispute regarding Future Response Costs as provided in Section XVIII of this Settlement Agreement.

(iii) Failure to timely submit insurance as provided in Section XXV and financial assurance as provided in Section XXVI of this Settlement Agreement.

(iv) Failure to timely designate a Project Coordinator as provided in Section VIII of this Settlement Agreement.

(v) Failure to timely perform any other aspect of the Work under this Settlement Agreement (excluding plans, reports, or other written documents).

66. Stipulated Penalty Amounts - Plans, Reports, or Other Written Documents.

The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate plans, reports, or other written documents pursuant to this Settlement Agreement including, but not limited to, failure to adhere to the General Schedule for Major Deliverables outlined in the SOW.

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$ 750	1 st through 14 th day
\$ 1,500	15 th through 30 th day
\$ 3,000	31 st day and beyond

67. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 86 (Work Takeover), Respondents shall be liable for a stipulated penalty in the amount of \$ 250,000.

68. All penalties shall begin to accrue on the day after the complete performance is due or the day a violation occurs and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Section X (EPA Approval of Plans and Other Submissions), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondents of any deficiency; and (b) with respect to a decision by the EPA management official designated in Paragraph 63 of Section XV (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA management official issues a final decision regarding such dispute. Nothing in this Settlement Agreement shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.

69. Following EPA's determination that Respondents have failed to comply with a requirement of this Settlement Agreement, EPA may give Respondents written notification of the same and describe the noncompliance. EPA may send Respondents a written demand for the payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondents of a violation.

70. All penalties accruing under this Section shall be due and payable to EPA within 30 days after Respondents' receipt from EPA of a demand for payment of the penalties, unless Respondents invoke the dispute resolution procedures under Section XV (Dispute Resolution). Respondents shall make all payments required by this Paragraph to EPA by Fedwire Electronic Funds Transfer to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

and shall reference stipulated penalties, Site/Spill ID Number A4S4, and the EPA docket number for this action.

At the time of payment, Respondents shall send notice that payment has been made as provided in Paragraph 78.b below.

71. The payment of penalties shall not alter in any way Respondents' obligation to complete performance of the Work required under this Settlement Agreement.

72. Penalties shall continue to accrue as provided in Paragraph 68 during any dispute resolution period, but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.

73. If Respondents fail to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondents shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 70.

74. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondents' violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Section 122(l) of CERCLA, 42 U.S.C. § 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided in this Settlement Agreement, except in the case of willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX (Reservation of Rights by EPA), Paragraph 84.

Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XVII. FORCE MAJEURE

75. Respondents agree to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, *force majeure* is defined as any event arising from causes beyond the control of Respondents or of any entity controlled by Respondents, including but not limited to their contractors and subcontractors, which delays or prevents performance of any obligation under this Settlement Agreement despite Respondents' best efforts to fulfill the obligation. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.

76. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondents shall notify EPA orally within 48 hours of when Respondents first knew that the event might cause a delay. Within seven (7) days thereafter, Respondents shall provide to EPA in writing an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondents' rationale for attributing such delay to a *force majeure* event if they intend to assert such a claim; and a statement as to whether, in the opinion of Respondents, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Failure to comply with the above requirements shall preclude Respondents from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure.

77. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondents in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondents in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. PAYMENT OF RESPONSE COSTS

78. Payments by Respondents of Future Response Costs. a. Respondents shall pay EPA all Future Response Costs not inconsistent with the NCP. On a periodic basis, EPA will send Respondents a bill requiring payment that includes a Superfund Cost Recovery Package Imaging

and On-Line System ("SCORPIOS") Report, which includes direct and indirect costs incurred by EPA, its contractors, and DOJ. Respondents shall make all payments within 30 days after receipt of each bill requiring payment, except as otherwise provided in Paragraph 80 of this Settlement Agreement. Payments shall be made to EPA by Fedwire Electronic Funds Transfer ("EFT") to:

Federal Reserve Bank of New York
ABA = 021030004
Account = 68010727
SWIFT address = FRNYUS33
33 Liberty Street
New York NY 10045
Field Tag 4200 of the Fedwire message should read "D 68010727 Environmental Protection Agency"

and shall reference Site/Spill ID Number A4S4 and the EPA docket number for this action.

b. At the time of payment, Respondents shall send notice that payment has been made to Paula V. Painter, Superfund Division, EPA Region 4, 61 Forsyth Street, S.W., Atlanta, Georgia 30303, and to the EPA Cincinnati Finance Office by email at acctsreceivable.cinwd@epa.gov, or by mail to

EPA Cincinnati Finance Office
26 Martin Luther King Drive
Cincinnati, Ohio 45268

Such notice shall reference Site/Spill ID Number A4S4 and the EPA docket number for this action.

c. The total amount to be paid by Respondents pursuant to Paragraph 78.a shall be deposited by EPA in the Ward Transformer Superfund Site Special Account to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

79. Interest. If Respondents do not pay Future Response Costs within 30 days after Respondents' receipt of a bill, Respondents shall pay Interest on the unpaid balance. The Interest on unpaid Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. If EPA receives a partial payment, Interest shall accrue on any unpaid balance. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondents' failure to make timely payments under this Section, including but not limited to, payments of stipulated penalties pursuant to Section XVI. Respondents shall make all payments required by this Paragraph in the manner described in Paragraph 78.

80. Respondents may contest payment of any Future Response Costs billed under Paragraph 78 if they determine that EPA has made a mathematical error or included a cost item that is not within the definition of Future Response Costs, or if they believe EPA incurred excess costs as a direct result of an EPA action that was inconsistent with a specific provision or provisions of the NCP. Such objection shall be made in writing within 30 days after receipt of the bill and must be sent to the EPA Project Coordinator. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondents shall within the 30 day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 78. Simultaneously, Respondents shall establish, in a duly chartered bank or trust company, an interest-bearing escrow account that is insured by the Federal Deposit Insurance Corporation, and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondents shall send to the EPA Project Coordinator a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, Respondents shall initiate the Dispute Resolution procedures in Section XV (Dispute Resolution). If EPA prevails in the dispute, within 5 days after the resolution of the dispute, Respondents shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 78. If Respondents prevail concerning any aspect of the contested costs, Respondents shall pay that portion of the costs (plus associated accrued interest) for which they did not prevail to EPA in the manner described in Paragraph 78. Respondents shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XV (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondents' obligation to reimburse EPA for its Future Response Costs.

81. Payments by Settling Federal Agencies.

a. The United States, on behalf of the Settling Federal Agencies, with the exception of the Tennessee Valley Authority ("TVA"), agrees to pay 6.23% of Respondents' Response Costs and TVA agrees to pay .77% of Respondents' Response Costs. Upon submission by EPA of the written notice of completion of work required by Section XXX, Respondents may submit a single claim for reimbursement of Respondents' Response Costs to the Section Chief of the Environmental Defense Section of the United States Department of Justice, identifying what Respondents believe to be the Settling Federal Agencies' share of Respondents' Response Costs. Respondents shall include with the claim for reimbursement a statement of all Respondents' Response Costs incurred by Respondents for which they claim a right of payment from the Settling Federal Agencies, along with any invoices and back-up documentation submitted by Respondents to the Ward Transformer Site Trust (the "Trust") for payment by the Trust, as well as proof of payment by the Trust, to the extent not already provided pursuant to Paragraph 81.d, of all the costs included in the claim for reimbursement, and, except for payments for EPA's Future Response Costs, certification under penalty of law that such costs were properly incurred and

consistent with Section 107(a)(4)(B) of CERCLA, 42 U.S.C. § 9607(a)(4)(B), and this Settlement Agreement (collectively, "Respondents' Claim for Reimbursement").

Upon receipt of Respondents' Claim for Reimbursement, the United States, on behalf of the Settling Federal Agencies, shall have 60 days to review Respondents' Claim for Reimbursement and raise any objections related thereto. Any objection must be in writing, sent to Respondents pursuant to Paragraph 81.f., and must identify any disputed costs and the basis for objection. In the event of an objection, the United States shall, within 60 days of transmitting the objection, pay the Respondents for the Settling Federal Agencies' Share, with the exception of TVA's share, of any costs that are not the subject of an objection. TVA shall have the same amount of time as the United States to pay its share of any costs that are not the subject of an objection by the United States.

If the United States does not raise an objection to Respondents' Claim for Reimbursement or any costs contained therein within 60 days of its receipt, then payment of the Settling Federal Agencies' share, with the exception of TVA's share, and TVA's share is due to Respondents within 90 days after receipt of Respondents' Claim for Reimbursement. In the event the United States raised an objection to Respondents' Claim for Reimbursement, Respondents and the United States agree to participate in informal negotiations to resolve the dispute. The period for informal negotiations shall be 60 days from the date the United States transmits its written objection, and may be extended upon mutual consent of Respondents and the United States. If informal negotiations are unsuccessful, Respondents and the United States may agree to non-binding mediation to resolve the matter. The reasonable costs and expenses of mediation shall be borne equally by the parties involved in the dispute, and each party shall bear its own attorneys' fees, expert fees, and other costs of its participation in such mediation. Paragraph 80 and Section XV (Dispute Resolution) of this Settlement Agreement do not apply to disputes raised pursuant to this Paragraph. Any such dispute shall not excuse performance by the Respondents of their obligations under this Settlement Agreement.

b. Interest. In the event that any payment required by Paragraph 81.a. is not made within 90 days after receipt of the Respondents' Claim for Reimbursement, the United States, on behalf of the Settling Federal Agencies with the exception of TVA, shall pay Interest on the unpaid balance, with such Interest commencing on the 91st day after receipt of Respondents' Claim for Reimbursement, through the date of payment. In the event the United States objected to all or some of the costs identified in Respondents' Claim for Reimbursement and the dispute is not resolved within 60 days of submission of the objection by the United States, then Interest on the unpaid balance for the disputed costs shall accrue commencing on the 61st day. If the United States prevails on an objection disputing costs, then the United States and TVA shall not be obligated to pay those disputed costs or any Interest that may have accrued thereon.

c. Payments shall be made by Automated Clearing House (ACH) Electronic Funds Transfer in accordance with instructions provided by Respondents at the time of submission of Respondents' Claim for Reimbursement.

d. Respondents agree to provide the United States with an electronic copy of the invoices and back-up documentation at the time such invoices and back-up documentation are submitted by Respondents to the Trust for payment. The United States shall provide Respondents with an electronic mail address to receive copies of the invoices and back-up documentation referenced in this subparagraph.

e. The Parties to this Settlement Agreement recognize and acknowledge that, except as to TVA, the payment obligations of the Settling Federal Agencies under this Settlement Agreement can only be paid from appropriated funds legally available for such purpose. Nothing in this Settlement Agreement shall be interpreted or construed as a commitment or requirement that any Settling Federal Agency obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. §1341, or any other applicable provision of the law.

f. Subject to the terms of Paragraph 81.d, whenever, under the terms of this Paragraph, written notice is required to be given or a report or other document is required to be sent by one Party to another, it shall be directed to the individuals at the addresses specified below, unless those individuals or their successors have given notice of a change to the other Parties in writing. Any notice may be given by courier, overnight mail, hand delivery, or by U.S. Mail. All notices and submissions shall be considered effective upon receipt, unless otherwise provided.

As to the Settling Federal Agencies:

Chief, Environmental Defense Section
Environment & Natural Resources Division
U.S. Department of Justice
P.O. Box 7611
Washington, DC 20044-7611
Re: DJ #90-11-6-17915

As to Respondents:

Daniel M. Darragh
Cohen & Grigsby, PC
625 Liberty Avenue
Pittsburgh, PA 15222-3152
Phone: 412-297-4718
Fax: 412-209-1940
ddarragh@cohenlaw.com

XIX. COVENANTS BY EPA

82. Covenants for Respondents by EPA. In consideration of the actions that will be performed and the payments that will be made by Respondents under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondents pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. These covenants shall take effect upon the Effective Date and are conditioned upon the complete and satisfactory performance by Respondents of all obligations under this Settlement Agreement,

including, but not limited to, payment of Future Response Costs pursuant to Paragraph 78 (Payment by Respondents of Future Response Costs). These covenants extend only to Respondents and do not extend to any other person.

83. Covenants for Settling Federal Agencies by EPA. In consideration of the payments that will be made by the United States on behalf of the Settling Federal Agencies under this Settlement Agreement, and except as specifically provided in Section XX (Reservations of Rights by EPA), the EPA covenants not to take administrative action against any Settling Federal Agency pursuant to Sections 106 and 107 of CERCLA, 42 U.S.C. Sections 9606 and 9607, for the Work and Future Response Costs. These covenants shall take effect upon the receipt by Respondents of the payment of Settling Federal Agencies' allocated share under Paragraph 81.a and any Interest due thereon under Paragraph 81.b and are conditioned upon the satisfactory performance by Settling Federal Agencies of all obligations under this Settlement Agreement. These covenants extend only to the Settling Federal Agencies and do not extend to any other person.

XX. RESERVATIONS OF RIGHTS BY EPA

84. Except as specifically provided in this Settlement Agreement, nothing in this Settlement Agreement shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants, or contaminants, or hazardous or solid waste on, at, or from the Site. Further, nothing in this Settlement Agreement shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondents or Settling Federal Agencies in the future to perform additional activities pursuant to CERCLA or any other applicable law.

85. The covenants set forth in Section XIX above do not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondents and Settling Federal Agencies with respect to all other matters, including, but not limited to:

- a. liability for failure by Respondents or Settling Federal Agencies to meet a requirement of this Settlement Agreement;
- b. liability for costs not included within the definition of Future Response Costs;
- c. liability for performance of response action other than the Work;
- d. criminal liability;
- e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;

f. liability arising from the past, present, or future disposal, release or threat of release of Waste Materials outside of the Site; and

g. liability for costs incurred or to be incurred by the Agency for Toxic Substances and Disease Registry related to the Site not paid as Future Response Costs under this Settlement Agreement.

86. Work Takeover. In the event EPA determines that Respondents have ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in their performance of the Work, or are implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may assume the performance of all or any portion of the Work as EPA determines necessary. Respondents may invoke the procedures set forth in Section XV (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs incurred by EPA in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondents shall pay pursuant to Section XVIII (Payment of Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANTS BY RESPONDENTS AND SETTLING FEDERAL AGENCIES

87. Covenants by Respondents. Respondents covenant and agree not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, Future Response Costs, Respondents' Response Costs or this Settlement Agreement, including, but not limited to:

a. any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;

b. any claim arising out of the Work or arising out of the response actions for which the Future Response Costs have or will be incurred, including any claim under the United States Constitution, the North Carolina Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, or at common law; or

c. any claim pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, Section 7002(a) of RCRA, 42 U.S.C. § 6972(a), or state law relating to the Work or payment of Future Response Costs or Respondents' Response Costs.

88. Covenants by Settling Federal Agencies. Settling Federal Agencies agree not to assert any direct or indirect claim for reimbursement from the EPA Hazardous Substance Superfund through CERCLA Sections 106(b)(2), 107, 111, 112, 113 or any other provision of law with respect to the Work, Future Response Costs, Respondents' Response Costs and this

Settlement Agreement. This covenant does not preclude demand for reimbursement from the Superfund of costs incurred by a Settling Federal Agency in the performance of its duties (other than pursuant to this Settlement Agreement) as lead or support agency under the National Contingency Plan (40 C.F.R Part 300).

89. Except as expressly provided in Paragraph 91 (Claims Against *De Minimis* and Ability to Pay Parties), these covenants shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Section XX (Reservations of Rights by EPA), other than in Paragraph 85.a (liability for failure to meet a requirement of the Settlement Agreement) or 85.d (criminal liability), but only to the extent that Respondents' and Settling Federal Agencies' claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

90. Nothing in this Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

91. Claims Against *De Minimis* and Ability to Pay Parties. Respondents agree not to assert any claims and to waive all claims or causes of action (including but not limited to claims or causes of action under Sections 107(a) or 113 of CERCLA) that they may have for response costs relating to the Site against (a) any person that has entered into a final Section 122(g) *de minimis* settlement with EPA with respect to the Site as of the Effective Date and (b) any person that has entered or in the future enters into a final settlement based on limited ability to pay with EPA with respect to the Site. This waiver shall not apply with respect to any defense, claim, or cause of action that a Respondent may have against any person if such person asserts a claim or cause of action relating to the Site against such Respondent.

XXII. OTHER CLAIMS

92. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondents.

93. Except as expressly provided in Paragraph 91 (Claims Against *De Minimis* and Ability to Pay Parties) and Section XIX (Covenants Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of or release from any claim or cause of action against Respondents, Settling Federal Agencies or any person not a Party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including but not limited to any claims of the United States for costs, damages, and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.

94. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIII. EFFECT OF SETTLEMENT/CONTRIBUTION

95. Except as provided in Paragraph 91 (Claims Against *De Minimis* and Ability to Pay Parties), nothing in this Settlement Agreement shall be construed to create any rights in, or grant any cause of action to, any person not a Party to this Settlement Agreement. Except as provided in Section XXI (Covenants by Respondents and Settling Federal Agencies), each of the Parties expressly reserves any and all rights (including, but not limited to, pursuant to Section 113 of CERCLA, 42 U.S.C. § 9613), defenses, claims, demands, and causes of action which each Party may have with respect to any matter, transaction, or occurrence relating in any way to the Site against any person not a Party hereto. Nothing in this Settlement Agreement diminishes the right of the United States, pursuant to Section 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)-(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

96. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), and that Respondents and Settling Federal Agencies are entitled, as of the Effective Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), or as may be otherwise provided by law, for "matters addressed" in this Settlement Agreement. The "matters addressed" in this Settlement Agreement are the Work, Future Response Costs, and Respondents' Response Costs. The Parties further agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondents and Settling Federal Agencies have, as of the Effective Date, resolved liability to the United States for some or all of a response action or some or all costs of such action.

97. Each Respondent shall, with respect to any suit or claim brought by it for matters related to this Settlement Agreement, notify EPA in writing no later than 60 days prior to the initiation of such suit or claim. EPA acknowledges that Respondents have notified it with regard to their pending litigation relating to the Removal Action costs incurred by Respondents at the OU2 portion of the Site. Each Respondent also shall, with respect to any suit or claim brought against it for matters related to this Settlement Agreement, notify EPA in writing within 10 days after service of the complaint or claim upon it. In addition, each Respondent shall notify EPA within 10 days after service or receipt of any Motion for Summary Judgment and within 10 days after receipt of any order from a court setting a case for trial, for matters related to this Settlement Agreement.

98. In any subsequent administrative or judicial proceeding initiated by EPA, or by the United States on behalf of EPA, for injunctive relief, recovery of response costs, or other relief relating to the Site, Respondents shall not assert, and may not maintain, any defense or claim based upon the principles of waiver, *res judicata*, collateral estoppel, issue preclusion, claim-splitting, or other defenses based upon any contention that the claims raised in the subsequent proceeding were

or should have been brought in the instant case; provided, however, that nothing in this Paragraph affects the enforceability of the covenant by EPA set forth in Section XIX.

99. Effective upon signature of this Settlement Agreement by a Respondent, such Respondent agrees that the time period commencing on the date of its signature and ending on the date EPA receives from such Respondent the payment(s) required by Section XVIII (Payment of Response Costs) and, if any, Section XVI (Stipulated Penalties) shall not be included in computing the running of any statute of limitations potentially applicable to any action brought by the United States related to the "matters addressed" as defined in Paragraph 96 and that, in any action brought by the United States related to the "matters addressed," such Respondent will not assert, and may not maintain, any defense or claim based upon principles of statute of limitations, waiver, laches, estoppel, or other defense based on the passage of time during such period. If EPA gives notice to Respondents that it will not make this Settlement Agreement effective, the statute of limitations shall begin to run again commencing 90 days after the date such notice is sent by EPA.

XXIV. INDEMNIFICATION

100. Respondents shall indemnify, save and hold harmless the United States, its officials, agents, contractors, subcontractors, employees, and representatives from any and all claims or causes of action arising from, or on account of negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors, and representatives in carrying out actions pursuant to this Settlement Agreement. In addition, Respondents agree to pay the United States all costs incurred by the United States, including but not limited to attorneys' fees and other expenses of litigation and settlement, arising from or on account of claims made against the United States based on negligent or other wrongful acts or omissions of Respondents, their officers, directors, employees, agents, contractors, subcontractors, and any persons acting on their behalf or under their control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into by or on behalf of Respondents in carrying out activities pursuant to this Settlement Agreement. Neither Respondents nor any such contractor shall be considered an agent of the United States.

101. The United States shall give Respondents notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondents prior to settling such claim.

102. Respondents waive all claims against the United States for damages or reimbursement or for set-off of any payments made or to be made to the United States, arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents and any person for performance of Work on or relating to the Site. In addition, Respondents shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from or on account of any contract, agreement, or arrangement between any one or more of Respondents and any person for performance of Work on or relating to the Site.

XXV. INSURANCE

103. At least 10 days prior to commencing any on-Site Work on OU2 under this Settlement Agreement, Respondents shall secure, and shall maintain for the duration of this Settlement Agreement, commercial general liability insurance with limits of one (1) million dollars, for any one occurrence, and automobile insurance with limits of one (1) million dollars, combined single limit, naming the EPA as an additional insured with respect to all liability arising out of the activities performed by or on behalf of Respondents pursuant to this Order. Within the same period, Respondents shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondents shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondents shall satisfy, or shall ensure that their contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondents in furtherance of this Settlement Agreement. If Respondents demonstrate by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondents need provide only that portion of the insurance described above which is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

104. Within 30 days after the Effective Date, Respondents shall establish and maintain financial security for the benefit of EPA in the amount of \$1,000,000 in one (1) or more of the following forms, in order to secure the full and final completion of Work by Respondents:

- a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;
- b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated cost of the Work;
- c. a trust fund administered by a trustee acceptable in all respects to EPA;
- d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;
- e. a written guarantee to pay for or perform the Work provided by one (1) or more parent companies of Respondents, or by one or more unrelated companies that have a substantial business relationship with at least one of Respondents, including a demonstration that any such guarantor company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f);

f. a demonstration of sufficient financial resources to pay for the Work made by one (1) or more of Respondents, which shall consist of a demonstration that any such Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f); and/or

g. An escrow account that provides EPA security and rights equivalent to those provided by a trust fund that meets the requirements of 40 C.F.R. § 264.151(a)(1) to finance the Work in accordance with this Settlement Agreement. The escrow account shall provide that the funds placed therein are specifically and irrevocably reserved for the Work. Respondents shall include in each written monthly progress report submitted pursuant to Paragraph 39 of this Settlement Agreement a report on the status of payments out of the escrow account. At EPA's request, Respondents shall make available to EPA any financial reports or other similar documents prepared by the escrow agent or other person responsible for approving payments out of the escrow account. Upon Issuance of the Notice of Completion of Work pursuant to Section XXX any funds remaining in the escrow account may be disbursed to Respondents.

105. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondents shall, within 30 days after receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 104, above. In addition, if at any time EPA notifies Respondents that the anticipated cost of completing the Work has increased, then, within 30 days after such notification, Respondents shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondents' inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.

106. If Respondents seek to ensure completion of the Work through a guarantee pursuant to Paragraph 104.e or 104.f, Respondents shall (a) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (b) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date, or such other date as agreed by EPA, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the dollar amount to be used in the relevant financial test calculations shall be the current cost estimate of \$1,000,000 for the Work at the Site plus any other RCRA, CERCLA, TSCA, or other federal environmental obligations financially assured by the relevant Respondent or guarantor to EPA by means of passing a financial test.

107. If, after the Effective Date, Respondents can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 104 of this Section, Respondents may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to

the estimated cost of the remaining Work to be performed. Respondents shall submit a proposal for such reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondents may seek dispute resolution pursuant to Section XV (Dispute Resolution). Respondents may reduce the amount of security in accordance with EPA's written decision resolving the dispute.

108. Respondents may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondents may change the form of the financial assurance only in accordance with the written decision resolving the dispute.

XXVII. INTEGRATION/APPENDICES

109. This Settlement Agreement and its appendices and any deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), etc. that will be developed pursuant to this Settlement Agreement and become incorporated into and enforceable under this Settlement Agreement constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The Parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Settlement Agreement. The following appendices are attached to and incorporated into this Settlement Agreement:

"Appendix A" is the list of Respondents.

"Appendix B" is the list of Settling Federal Agencies.

"Appendix C" is the Site Map.

"Appendix C2" is the map of OU2.

"Appendix D" is the Statement of Work.

XXVIII. ADMINISTRATIVE RECORD

110. EPA will determine the contents of the administrative record file for selection of the remedial action. Respondents shall submit to EPA documents developed during the course of the RI/FS upon which selection of the response action may be based. Upon request of EPA, Respondents shall provide copies of plans, task memoranda for further action, quality assurance memoranda and audits, raw data, field notes, laboratory analytical reports, and other reports. Upon request of EPA, Respondents shall additionally submit any previous studies conducted under state, local, or other federal authorities relating to selection of the response action, and all

communications between Respondents and state, local, or other federal authorities concerning selection of the response action. At EPA's discretion, Respondents shall establish a community information repository at or near the Site, to house one copy of the administrative record. Respondents will not be required to provide copies of any records, reports, or data that were previously submitted to EPA by Respondents pursuant to the AOC.

XXIX. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

111. This Settlement Agreement shall be effective upon signature by the Regional Administrator or his/her delegatee.

112. This Settlement Agreement may be amended by mutual agreement of EPA, Respondents, and Settling Federal Agencies. Amendments shall be in writing and shall be effective when signed by EPA. EPA Project Coordinators do not have the authority to sign amendments to the Settlement Agreement.

113. No informal advice, guidance, suggestion, or comment by the EPA Project Coordinator or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondents or Settling Federal Agencies shall relieve Respondents or Settling Federal Agencies of their obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

XXX. NOTICE OF COMPLETION OF WORK

114. When EPA determines that all Work has been fully performed in accordance with this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including, but not limited to, payment of Future Response Costs and record retention, EPA will provide written notice to Respondents and Settling Federal Agencies. If EPA determines that any Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondents, provide a list of the deficiencies, and require that Respondents modify the RI/FS Work Plan if appropriate in order to correct such deficiencies, in accordance with Paragraph 36 (Modification of the RI/FS Work Plan). Failure by Respondents to implement the approved modified RI/FS Work Plan shall be a violation of this Settlement Agreement.

The undersigned representatives of the Respondents and Settling Federal Agencies certify that they are fully authorized to enter into the terms and conditions of this Settlement Agreement and to bind the parties they represent to this Settlement Agreement.

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR CONSOLIDATION COAL COMPANY, INDIVIDUALLY AND AS THE SUCCESSOR
TO BISHOP COAL COMPANY AND ITMANN COAL COMPANY

It is so AGREED this 12th day of September, 2013

By: 

Signature

Printed Name: Stephen W. Turnison

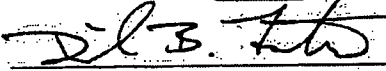
Title: Vice President

Address: 1000 CONSOL Energy Dr. Canonsburg, PA 15317

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR DUKE ENERGY PROGRESS, INC.:

It is so AGREED this 16th day of September, 2013

By: 
Signature

Printed Name: David B. Fountain


Title: Assistant Secretary

Address: 410 South Wilmington St.
Raleigh, NC 27601

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation Focused
Feasibility Study

FOR PCS PHOSPHATE COMPANY, INC.:

It is so ~~AGREED~~ this 18th day of September, 2013

By: 
Signature

Printed Name: Brent Heimann

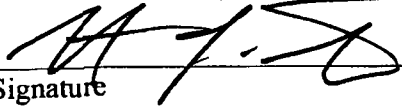
Title: President

Address: 1101 Skokie Blvd. Suite 400 Northbrook, IL 60062

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR THE UNITED STATES DEPARTMENT OF THE ARMY:

It is so AGREED this 29 day of August, 2013

By: 
Signature

Printed Name: Kenneth J. Tozzi

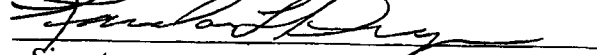
Title: Chief, U.S. Army Environmental Law Division

Address: US Army Legal Services Agency
Environmental Law Division
9275 Gunston Road
Fort Belvoir, VA 22060

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR THE UNITED STATES DEPARTMENT OF THE AIR FORCE:

It is so AGREED this 29th day of October, 2013

By: 
Signature

Printed Name: RANDON DRAPER

Title: Chief, ENVIRONMENTAL LAW & LITIGATION (AFLOA/JACE)

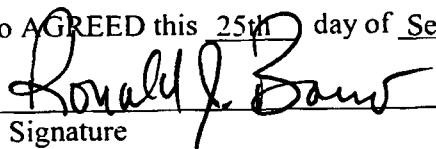
Address: JOINT BASE ANDREWS

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR THE UNITED STATES DEPARTMENT OF THE NAVY:

It is so AGREED this 25th day of September, 2013

By:


Signature

Printed Name: Ronald J. Borro

Title: Associate General Counsel (Litigation)

Address: 720 Kennon Street SE Room 233
Washington Navy Yard, DC 20374-5013

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR THE UNITED STATES DEPARTMENT OF VETERANS AFFAIRS:

It is so AGREED this 22 day of November, 2013

By:

Signature

Printed Name: Janet P. Murphy, MBA

Title: Acting Deputy Under Secretary for
Health for Operations and Management

Address: VA Central office
810 Vermont Ave NW
Washington DC 20420

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR THE UNITED STATES DEPARTMENT OF HOMELAND SECURITY:

It is so AGREED this 7 day of November, 2013

By: 
Signature

Printed Name: Neal J. Swartz

Title: Associate General Counsel

Address: Washington, DC

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation Focused
Feasibility Study

FOR THE UNITED STATES COAST GUARD:

It is so AGREED this 20 day of September, 2013

By: Michael Miller

Signature

Printed Name: Michael Miller

Title: Chief Environmental Liaison Officer

Address: 2100 Second St. SE, Stop 7121
Washington, DC 20593

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR THE CENTRAL INTELLIGENCE AGENCY:

It is so AGREED this _____ day of _____, 2013

By: _____
Signature

Printed Name: _____

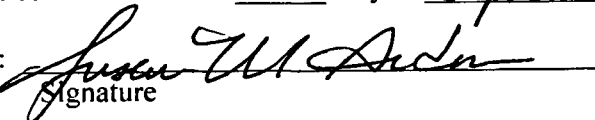
Title: _____

Address: _____

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR THE CENTRAL INTELLIGENCE AGENCY:

It is so AGREED this 23 day of September, 2013

By: 
Signature

Printed Name: Susan M. Gordon

Title: Director for Support

Address: Washington, D.C. 20505

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial
Investigation/Focused Feasibility Study

FOR THE DEFENSE LOGISTICS AGENCY:

It is so AGREED this 1st day of November, 2013

By: David A. Rodriguez for

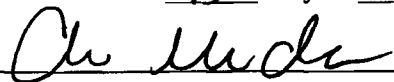
Printed Name: DAVID RODRIGUEZ

Title: Acting Director
DLA Installation Support

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

FOR THE TENNESSEE VALLEY AUTHORITY:

It is so AGREED this 15 day of September, 2013

By: 
Signature


Printed Name: Aaron Melda

Title: SVP Operations Support

Address: 1101 Market Street
Chattanooga TN. 37402

In the Matter of the Ward Transformer Superfund Site
Raleigh, Wake County, North Carolina
Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation/Focused
Feasibility Study

It is so ORDERED AND AGREED this 9th day of January, 201~~4~~

BY: 
Don Rigger, Chief
Superfund Remedial and Site Evaluation Branch
Superfund Division
Region 4
U.S. Environmental Protection Agency

DATE: 9-JAN-2014

EFFECTIVE DATE: January 9, 2014

Appendix A

Respondents

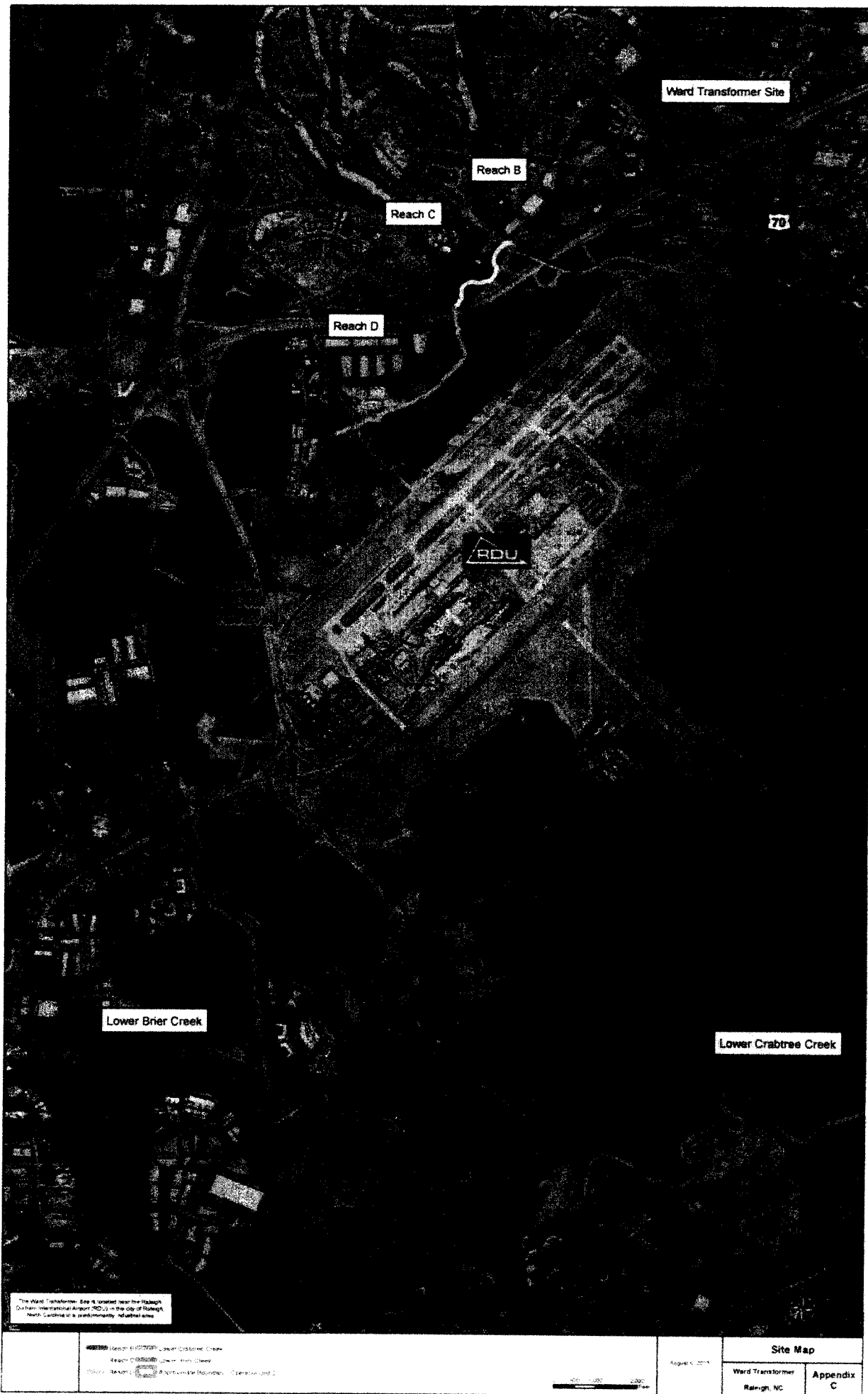
1. Consolidation Coal Company, Individually and as Successor to Bishop Coal Company and Itmann Coal Company
2. Duke Energy Progress, Inc.
3. PCS Phosphate Company, Inc.

Appendix B

Settling Federal Agencies

1. The United States Department of the Army
2. The United States Department of the Air Force
3. The United States Department of the Navy
4. The United States Department of Veteran Affairs
5. The United States Department of Homeland Security
6. The United States Coast Guard
7. The Central Intelligence Agency
8. The Defense Logistics Agency
9. The Tennessee Valley Authority

Appendix C
Site Map



The Ward Transformer Site is located near the Raleigh-Carroll International Airport (RDU) in the city of Raleigh, North Carolina. It is a predominantly industrial area.

Ward Transformer Site
Reach B
Reach C
Reach D
Lower Brier Creek
Lower Crabtree Creek

August 1, 2014

Site Map

Ward Transformer
Raleigh, NC

Appendix
C

Appendix C2

Operable Unit 2

Appendix D

Statement of Work

**STATEMENT OF WORK FOR THE
SUPPLEMENTAL REMEDIAL INVESTIGATION/FOCUSED FEASIBILITY STUDY
AND SUPPLEMENTAL BASELINE RISK ASSESSMENT FOR OPERABLE UNIT 2
(OU2) AT THE WARD TRANSFORMER SUPERFUND SITE**

August, 2013

INTRODUCTION

EPA acknowledges that Respondents have completed some of the tasks required by this Statement of Work ("SOW"), that Respondents have available some of the data and information required by this SOW, and that EPA completed a Remedial Investigation(" RI") at the Site in 2004. This previous work may be used to meet some of the requirements in this SOW, upon submission to and formal approval by EPA.

Using the data presented in the 2004 Remedial Investigation Report and Risk Assessment and all of the data collected in performing the Removal Action at the Site, including but not limited to the data presented in the 2006 Supplemental Site Characterization Report, the June 2012 Phase 1 Removal Action Completion Report, and the additional data collected as set forth herein, the broad objectives for this Supplemental Remedial Investigation/Focused Feasibility Study (RI/FS), and Supplemental Baseline Risk Assessment (BRA) are to determine and describe the current, Post-Removal Action nature and extent of contamination for Operable Unit 2 (OU2) at the Ward Transformer Site (the "Site"); based on post-Removal Action Site conditions, assess the current and potential risks to public health, welfare, and the environment; and to develop and evaluate potential Remedial Action Alternatives consistent with 40 C.F.R. § 300.415(d) and (g). The Supplemental RI and Focused Feasibility Study ("FS") are interactive and shall be conducted concurrently so that the data collected influences the development of the Remedial Action Alternatives in the FS, which in turn influences the data needs and the scope of any possible Treatability Studies.

The Respondents listed in the Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") shall conduct the RI/FS and BRA and produce an RI/FS Report that is in accordance with this Statement of Work, the "Interim Final Guidance for Conducting Remedial Investigations and Feasibility Studies under CERCLA" ("RI/FS Guidance") (OSWER Directive # 9355.3-01, October 1988 or subsequently issued guidance), "Guidance for Data Useability in Risk Assessment" (OSWER Directive #9285.7-09A, April 1992 or subsequently issued guidance), and guidance referenced therein, the National Oil and Hazardous Substances Pollution Contingency Plan (March 8, 1990) and other guidances used by EPA in conducting an RI/FS (the primary guidances are listed in Attachment A), as well as any additional requirements in the Settlement Agreement. The RI/FS Guidance describes the report format and the required report content. The Respondents shall furnish all necessary personnel, materials, and services needed for, or incidental to, performing the RI/FS, except as otherwise specified in the Settlement Agreement.

At the completion of the RI/FS, EPA shall be responsible for the selection of a remedy to be implemented for OU2 of the Site. EPA will document this selection of a remedy in a Record of Decision (ROD) for OU2. The Remedial Action Alternative selected by EPA will meet the cleanup standards specified in §121 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended ("CERCLA"), 42 U.S.C. § 9621. That is, the selected remedial action will be protective of human health and the environment, will be cost effective, will utilize permanent solutions and alternative treatment technologies or resource recovery technologies to the maximum extent practicable, will be in compliance with, or include a waiver of, applicable or relevant and appropriate requirements of other laws or regulations, and will address the statutory preference for on-site treatment which permanently and significantly reduces the volume, toxicity, or mobility of the hazardous substances, pollutants, and contaminants as a principal element. The Final Supplemental Remedial Investigation and Focused Feasibility Study Report(s), as adopted by EPA, and the Supplemental Baseline Risk Assessment will, with the remainder of the Administrative Record, form the basis for the selection of the remedy to be implemented for OU2 and will provide the information necessary to support the development of the OU2 ROD.

As specified in §104(a)(1) of CERCLA, EPA must provide oversight of the Respondents' activities throughout the RI/FS. The Respondents shall support EPA's initiation and conduct of activities related to the implementation of oversight activities. However, the primary responsibility for conducting an adequate RI/FS to enable and support the selection of a remedy shall lie with the Respondents. EPA review and approval of deliverables is a tool to assist this process and to satisfy, in part, EPA's responsibility to provide effective protection of public health, welfare, and the environment. EPA approval of a task or deliverable shall not be a guarantee as to the ultimate adequacy of such task or deliverable. A summary of the major deliverables that Respondents shall submit for the RI/FS is attached (Attachment B). In addition, a general schedule of RI/FS activities is also attached (Attachment C).

TASK 1 - SCOPING

Scoping is the initial planning process of the RI/FS. Scoping is continued, repeated as necessary, and refined throughout the RI/FS process. In addition to developing the OU2 Site Objectives of the RI/FS, EPA has developed a Site Management Strategy. Consistent with the Site Management Strategy, the specific project scope shall be planned by the Respondents and EPA. The Respondents shall document the specific project scope in a Work Plan. Because the work required to perform the RI/FS is not fully known at the onset, and is phased in accordance with OU2's complexity and the amount of available information, it may be necessary to modify the Work Plan during the RI/FS to satisfy the objectives of the study. The Site Objectives for OU2 of the Ward Transformer Site have been determined preliminarily, based on available information, to be the following:

1. Review of existing information pertaining to the Site. This review includes, but is not limited to, the 2004 RI and Risk Assessment report, the 2007 RI Report, FS Report and ROD for OU1, all available Removal Action data and information, including the 2006

Supplemental Site Characterization Report, the June 2012 Phase I Removal Action Completion Report, EPA Site Inspection Reports, and reports from local, State and Federal agencies.

2. Review of relevant guidance (see attached references) to understand the remedial process. This information shall be used in performing the RI/FS and preparing all deliverables under this SOW.
3. Identification of all Federal and State applicable or relevant and appropriate requirements (ARARs).
4. Within the area described as OU2 at the Site, determination of the nature and lateral and vertical extent of contamination remaining after completion of the Phase 1 and Phase 2 removal activities (contaminants, concentrations and distributions) for all affected media including air, ground water, soil, surface water, and sediment, etc.
5. Respondents' preparation of the Supplemental Baseline Risk Assessment which shall consist of a Human Health Assessment and an Ecological Risk Assessment based on post-Removal Action Site conditions.
6. Identification and screening of potential remedial technologies along with containment/disposal requirements for residuals or untreated contaminants.
7. Assembly of technologies into Remedial Action Alternatives and screening of alternatives.
8. Performance of bench or pilot Treatability Studies if necessary.
9. Detailed analysis of Remedial Action Alternatives.

The Site Management Strategy is developed based on the Site Objectives that have been established for OU2 at the Site and the optimal sequence of Site activities. The Site Management Strategy should take into consideration the completed removal activities, other operable units established at the Site and their Remedial Action Objectives. The Site Management Strategy should include: identifying the types of actions that may be necessary to determine the optimal sequence of activities to be conducted at OU2.

The Site Management Strategy for OU2 at the Ward Transformer Site includes the following:

1. A complete investigation/assessment of remaining contamination remaining at OU2 following completion of the Phase 1 and 2 removal activities.
2. EPA oversight of the Respondents' conduct of the work (i.e., the RI/FS) to ensure compliance with applicable laws, regulations and guidances and to ensure that the work proceeds in a timely fashion.

3. EPA oversight of the Respondents' preparation of the Supplemental Baseline Risk Assessment.
4. Respondents provide EPA with the information necessary for the Remedy Selection and Record of Decision phase.

When scoping the specific aspects of the project, the Respondents must meet with EPA to discuss all project planning decisions and special concerns associated with the Site.

Site Background

The Site is located along Mount Herman Road in a predominantly industrial area of Raleigh, Wake County, North Carolina. The Site includes the former Ward Transformer plant and surrounding properties and areas downstream from the plant, including unnamed tributaries to Little Brier Creek (Reach A, B, and C); Little Brier Creek (Reach D); Brier Creek Reservoir; Brier Creek; Lake Crabtree; and lower Crabtree Creek, and encompasses the areal extent of contamination therefrom. Operable Unit One ("OU1") includes the areas downgradient from the Ward Transformer plant and includes Reaches B, C, and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; and lower Crabtree Creek. Operable Unit Two ("OU2") includes the former Ward Transformer plant, certain properties surrounding the plant, including a portion of the Raleigh-Durham International Airport property and nearby drainage pathways upgradient of Reach B, including Reach A.

The Ward Transformer plant was built on approximately 11 acres of previously undeveloped land (Ward Property) in 1964. Ward Transformer Company, Inc. (Ward Transformer) is the former owner and operator and current owner of the Ward Property. Ward Transformer conducted operations from 1964 until 1997, when Ward Transformer Sales and Service, Inc. (Ward Sales) became operator. Ward Sales continued the same operations until 2006, when all operations ceased at the plant. While operating, the companies manufactured, repaired, reconditioned, rebuilt, purchased, and sold transformers, capacitors, switchgear, and other similar types of electrical equipment.

During Ward Transformer's and Ward Sales' operation of the plant, polychlorinated biphenyls (PCBs) were released into the environment from transformers, transformer parts, and transformer oil. PCB contamination was found in the soil at the Ward Transformer plant and adjacent properties, in the water and sediment in the plant's storm water lagoon, and in the sediments along the surface water pathway draining the plant. PCBs were also found in sediment samples collected in Reaches A, B, C, and D; Brier Creek Reservoir; Brier Creek; and the beginning of Lake Crabtree. In addition, site contaminants were detected in aquatic biota (fish and crayfish) tissue collected in Reaches B, C, and D; Brier Creek Reservoir; Brier Creek; Lake Crabtree; Crabtree Creek; and the Neuse River.

In 2004, EPA completed a Remedial Investigation and Risk Assessment Report, performed a removal assessment, and issued an Enforcement Action Memorandum memorializing EPA's

decision to implement a time-critical removal action at the Site. In 2005, EPA entered into an Administrative Settlement Agreement and Order on Consent for Removal ("AOC") with nine potentially responsible parties for the performance of the time-critical removal action and the reimbursement of response costs. In 2007, EPA completed a Remedial Investigation and Feasibility Study ("RI/FS") for OU1 at the Site and in 2008 EPA issued a Record of Decision ("ROD") memorializing the remedial action selected by EPA for OU1. In 2011, after unsuccessful attempts to negotiate a consent decree, EPA issued a Unilateral Administrative Order to 23 potentially responsible parties to perform the remedial design and remedial action ("RD/RA") selected in the OU1 ROD. The time-critical removal action at OU2 and the RD/RA for OU1 are currently on-going.

As required by the 2005 AOC, the Respondents conducted a supplemental site characterization study to better define the extent of PCB soil contamination at OU2. In 2006, a Supplemental Site Characterization Study Report was submitted to and approved by EPA.

In 2006, Ward Transformer and Ward Sales ceased operations at the Site and advised Respondents and EPA that they did not have the resources to maintain the Site's surface water containment and treatment system on a long term basis. Since the Ward operations had ceased, the removal action included an assessment of the PCB levels in the buildings at the Ward properties. To achieve the 1 ppm cleanup standard required by the Enforcement Action Memorandum, the Ward Transformer building, the Horizon building and the Ward water treatment building were demolished and disposed of and approximately 440,000 tons of PCB contaminated soil were excavated and either treated onsite through a Low Temperature Thermal Desorption unit or disposed offsite. The treated soil, approximately 320,000 tons, was placed on the Ward property and covered with clean offsite borrow soil and vegetated. Removal action work is continuing on an adjacent property and in a drainage course on property owned by the Raleigh-Durham International Airport. That work is proceeding since access issues with the former and current property owners have been resolved.

Following completion of the Phase 1 Removal Action work, except for ongoing revegetation maintenance and monitoring, Respondents submitted to EPA the June 2012 Phase 1 Removal Action Completion Report which includes all of the results from the sampling during Phase 1 of the Removal Action to determine the limits of the excavations, to confirm the cleanup to the 1 ppm PCB standard, and to confirm the results of the onsite thermal treatment.

The Baseline Human Health Risk Assessment, conducted as part of the 2007 OU1 Remedial Investigation ("RI") Report for the Site, concluded that there are in general unacceptable cancer risks and non-cancer risks (e.g., adverse health effects to immune system, skin, and eyes) associated with consumption of fish from Brier Creek Reservoir, Lake Crabtree, and Crabtree Creek. The Baseline Ecological Risk Assessment, which is also part of the 2007 OU1 RI Report, concluded that the maximum concentrations detected in a variety of environmental media are at levels that are likely to pose risk to ecological receptors such as benthic organisms (e.g., snails, crayfish, and mussels), fish, aquatic organisms, minks, herons, raccoons, deer mice, and robins.

The Ward Transformer Superfund Site was proposed for inclusion on the National Priorities List ("NPL") pursuant to CERCLA Section 105, 42 U.S.C. § 9605, on September 5, 2002, (67 Fed. Reg. 56794). The Site was finalized on the NPL on April 30, 2003.

The following activities have been or shall be performed by the Respondents as a function of the project planning process.

Collect and Analyze Existing Data and Document the Need for Additional Data

In preparing and submitting the June 2012 Phase I Removal Action Completion Report and preparing the Phase 2 Removal Action Work Plan, Respondents have gathered and analyzed the existing background information regarding the Site.

Site Visit

As necessary, the Respondents shall conduct a Site Visit with the EPA Remedial Project Manager (RPM) during the project scoping phase to assist in developing a conceptual understanding of current OU2 Site conditions, including remaining contamination, data gaps, and potential exposure pathways and receptors at OU2. This information shall be utilized to better scope the project and to determine the extent of additional data necessary to complete the OU2 Site Characterization, better define potential ARARs, and narrow the range of preliminarily identified Remedial Action Alternatives.

A. Project Planning

Project planning activities include those tasks described below as well as the development of specific deliverables as described in paragraph B. The Respondents shall meet with EPA, as necessary, regarding the following activities and before the drafting of the scoping deliverables.

Refine the OU2 Site Objectives and Develop Preliminary Remedial Action Objectives and Alternatives

Once existing information about OU2 and a conceptual understanding of the potential risks posed by OU2 have been reviewed with the RPM, the Respondents shall refine the OU2 Site Objectives and develop preliminary remedial action objectives for each actually or potentially contaminated medium. Such remedial action objectives shall include objectives for engineering and institutional controls. Any revised OU2 Site Objectives shall be documented in a technical memorandum and are subject to EPA approval prior to development of the other scoping deliverables. The Respondents shall then identify a preliminary range of broadly defined potential Remedial Action Alternatives and associated technologies. The range of potential alternatives shall include, at a minimum, alternatives addressing the manner in which long-term residuals or untreated wastes are managed; alternatives that involve containment and treatment components; alternatives that involve containment with little or no treatment; and a no-action alternative.

Document the Need for Treatability Studies

If remedial actions involving treatment have been identified by the Respondents or EPA, Treatability Studies may be required. Where Treatability Studies are needed, identification of possible technologies and screening shall be done and the results submitted with the RI/FS Work Plan. Initial Treatability Study activities (such as research and study design) shall be planned to occur concurrently with OU2 Site Characterization activities (see Tasks 3 and 4).

Begin Preliminary Identification of Potential ARARs

The Respondents shall conduct a preliminary identification of potential State and Federal ARARs (chemical-specific, location-specific, and action-specific) to assist in the refinement of remedial action objectives and the initial identification of Remedial Action Alternatives and ARARs associated with particular actions. ARAR identification shall continue as conditions and contaminants at OU2 and Remedial Action Alternatives are better defined.

B. Scoping Deliverables

At the conclusion of the project planning phase, the Respondents shall submit an RI/FS Work Plan and a Field Operations Plan (FOP) (i.e., Sampling and Analysis Plan, Quality Assurance and Quality Control Plan, and a Health and Safety Plan). The RI/FS Work Plan and FOP must be reviewed and approved, and the Health and Safety Plan reviewed by EPA prior to the initiation of field activities.

RI/FS Work Plan

A Work Plan documenting the decisions and evaluations completed during the scoping process shall be submitted to EPA for review and approval. The Work Plan shall be developed in conjunction with the Sampling and Analysis Plan and the Health and Safety Plan, although each plan may be delivered under separate cover. The Work Plan shall include a comprehensive description of the work to be performed, the medias to be investigated (i.e., Air, Ground Water, Surface Water, Surface and Subsurface Soils, and Sediments, etc.), the methodologies to be utilized, and the rationale for the selection of each methodology. A comprehensive schedule for completion of each major activity and submission of each deliverable shall also be included. This schedule shall be consistent with Attachment C. The schedule should recognize that it will take some time to complete the Phase 2 removal activities and that work could impact the schedule for OU2.

Specifically, the Work Plan shall present the following:

- A statement of the problem(s) and potential problem(s) posed by OU2 and the objectives of the RI/FS based on current Post-Removal Action Site Conditions.
- A background summary setting forth the following:
 - a description of the Site including the geographic location, and, to the extent possible, a description of the physiography, hydrology, geology, demographics, and the ecological, cultural, and natural resource features of the Site;
 - A synopsis of the history of the Site including a summary of past disposal practices and a description of previous responses that have been conducted by local, State, Federal, or private parties at the Site, including in particular the Removal Actions conducted by Respondents;
 - A summary of the existing data in terms of current physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at OU2 in order to describe the current Post-Removal Action conditions at OU2 using the data in the June 2012 Phase 1 Removal Action Completion Report;
 - A description of the Site Management Strategy developed by EPA during scoping as discussed previously in this SOW and as may be modified based on current OU2 conditions with EPA's approval;
 - A preliminary identification of Remedial Action Alternatives and data needs for evaluation of Remedial Action Alternatives. This preliminary identification shall reflect coordination with any likely Treatability Study requirements (see Tasks 1 and 4).
- A process for identifying Federal and State ARARs (chemical-specific, location-specific, and action-specific).
- A statement recognizing Respondents' preparation of the Supplemental Baseline Risk Assessment.
- A detailed description of the tasks to be performed, information needed for each task and for EPA's Supplemental Baseline Risk Assessment, information to be produced during and at the conclusion of each task, and a description of the work products that shall be submitted to EPA. This description must also include the deliverables set forth in the remainder of this Scope of Work.
- A schedule for each of the required activities which is consistent with Attachment C and the RI/FS Guidance.
- A project management plan, including a data management plan (e.g., requirements for project management systems and software, minimum data requirements, data format, and

backup data management), monthly reports to EPA, and meetings and presentations to EPA at the conclusion of each major phase of the RI/FS.

The Respondents shall refer to Appendix B of the RI/FS Guidance for a comprehensive description of the contents of the required Work Plan. Because of the iterative nature of the RI/FS, additional data requirements may be identified throughout the RI/FS process. The Respondents shall submit a technical memorandum documenting any need for additional data along with the proposed data quality objectives (DQOs) whenever such requirements are identified. In any event, the Respondents are responsible for fulfilling additional data and analysis needs identified by EPA consistent with the general scope and objectives of this RI/FS and the Settlement Agreement.

Sampling and Analysis Plan

The Respondents shall prepare a Sampling and Analysis Plan (SAP) to ensure that sample collection and analytical activities are conducted in accordance with technically acceptable protocols and that the data generated will meet the DQOs established. The SAP provides a mechanism for planning field activities and consists of a Field Sampling and Analysis Plan (FSAP) and a Quality Assurance Project Plan (QAPP).

The FSAP shall define in detail the sampling and data gathering methods that shall be used on the project. It shall include sampling objectives, sample location (horizontal and vertical) and frequency, sampling equipment and procedures, and sample handling and analysis. The QAPP shall describe the project objectives and organization, functional activities, and quality assurance and quality control (QA/QC) protocols that shall be used to achieve the desired DQOs. The QAPP will be prepared in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R-5)" (EPA/240/B-01/003, March 2001), or subsequently issued guidance, and "EPA Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-02/009, December 2002), or subsequently issued guidance. The DQOs will, at a minimum, reflect use of analytical methods for identifying contamination and addressing contamination consistent with the levels for remedial action objectives identified in the National Contingency Plan. In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical procedures, and data reduction, validation, and reporting. Field personnel shall be available for EPA QA/QC training and orientation, as required. EPA acknowledges that Respondents' QAPP for the Removal Action meets these requirements and was approved by EPA.

The Respondents shall demonstrate, in advance and to EPA's satisfaction, that each laboratory it may use is qualified to conduct the proposed work. This demonstration must include use of methods and analytical protocols for the chemicals of concern (typically the Target Compound List (TCL) and the Target Analyte List (TAL)) in the media of interest within detection and quantification limits consistent with both QA/QC procedures and DQOs approved by EPA in the QAPP for the Site. The laboratory must

have and follow an EPA-approved QA program. The Respondents shall provide assurances that EPA has access to laboratory personnel, equipment and records for sample collection, transportation, and analysis. EPA may require that the Respondents submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment, and material specifications. In addition, EPA may require submittal of data packages equivalent to those generated in the EPA Contract Laboratory Program (CLP) and may require laboratory analysis of performance samples (blank and/or spike samples) in sufficient number to determine the capabilities of the laboratory. If a laboratory not currently participating in the CLP is selected, methods consistent with CLP methods that would be used at OU2 for the purposes proposed and QA/QC procedures approved by EPA shall be used. In addition, if the laboratory is not in the CLP program, a laboratory QA program must be submitted for EPA review and approval granted prior to the shipment of Site samples to that laboratory for analysis.

Health and Safety Plan

A Health and Safety Plan shall be prepared in conformance with the Respondents' health and safety program, and in compliance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992 or subsequently issued guidance). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. The Health and Safety Plan shall include the eleven elements described in the RI/FS Guidance, such as a health and safety risk analysis, a description of monitoring and personal protective equipment, medical monitoring, and site control. It should be noted that EPA does not "approve" the Respondents' Health and Safety Plan, but rather EPA reviews it to ensure that all necessary elements are included, and that the plan provides for the protection of human health and the environment. EPA acknowledges that Respondents' HASP for the Removal Action meets these requirements and was accepted by EPA.

Field

TASK 2 - COMMUNITY RELATIONS

To the extent required by EPA, the Respondents shall provide community relations support to EPA during the planning and implementation of the community involvement program. EPA will take the lead in the planning and implementation of the program. The RPM will oversee and direct all community relations activities performed to ensure that they are in accordance with the outline of activities contained in this document and that they fulfill the statutory requirements as defined in CERCLA. Tasks for which EPA may request support are outlined below.

- Community Involvement Work Plan Preparation
- Community Interviews

- Community Relations Plan Preparation
- Fact Sheet Preparation
- Public Meeting Assistance
- Public Notice Preparation

TASK 3 - SITE CHARACTERIZATION AND REUSE ASSESSMENT

As part of the RI, the Respondents shall perform the activities described in this task, including the preparation of a Site Characterization Summary for OU2 and an RI Report. The overall objective of Site Characterization is to describe areas of OU2 that may pose a threat to human health or the environment. This objective is accomplished by first determining physiography, geology, and hydrology of OU2. Surface and subsurface pathways of migration shall also be defined. The Respondents shall identify the sources of contamination and define the nature, extent, and volume of the sources of contamination, including their physical and chemical constituents as well as their concentrations at incremental locations in the affected media. The Respondents shall also investigate the extent of migration of this contamination as well as its volume and any changes in its physical or chemical characteristics. This investigation will provide for a comprehensive understanding of the nature and extent of contamination at OU2. Using this information, contaminant fate and transport shall be determined and projected.

During this phase of the RI/FS, the Work Plan, SAP, and Health and Safety Plan shall be implemented. The Removal Action data shall be reviewed, and such additional field data as may be needed to address data gaps shall be collected and analyzed to provide the information required to accomplish the objectives of the study. The Respondents shall notify EPA at least two weeks in advance of the field work regarding the planned dates for field activities, including installation of monitoring wells, installation and calibration of equipment, pump tests, field layout of any sampling grid, excavation, sampling and analysis activities, and other field investigation activities.

A. Field Investigation

The field investigation includes the gathering of data to define physical characteristics, sources of contamination, and the nature and extent of contamination at OU2. These activities shall be performed by the Respondents in accordance with the Work Plan and SAP. At a minimum, this investigation shall include the following activities:

Access

The Respondents shall have the primary responsibility for obtaining access in support of field activities, including but not limited to staging of field activities, installation of monitoring wells, and the collection of samples. In the case of recalcitrant parties, EPA

will provide the necessary enforcement support to secure access, as required by the Administrative Settlement Agreement and Order on Consent for Supplemental Remedial Investigation and Focused Feasibility Study ("Settlement Agreement").

Implementing and Documenting Field Support Activities

The Respondents shall initiate field support activities following approval of the Work Plan and FOP. Field support activities may include obtaining access to OU2 and any other properties, property surveys, scheduling, and procuring equipment, office space, laboratory services, utility services and/or contractors. The Respondents shall notify EPA at least two weeks prior to initiating field support activities so that EPA may adequately schedule oversight tasks.

Investigating and Defining Site Physical and Biological Characteristics

The Respondents shall collect data on the physical and biological characteristics of OU2 and its surrounding areas including the physiography, geology, and hydrology, and specific physical characteristics of OU2. This information shall be ascertained through a combination of physical measurements, observations, and sampling efforts and shall be utilized to define potential transport pathways and receptor populations. In defining the physical characteristics of OU2, the Respondents shall also obtain sufficient engineering data (such as pumping characteristics, soil particle size, permeability, etc.) for the projection of contaminant fate and transport and the development and screening of Remedial Action Alternatives, including information necessary to evaluate treatment technologies. To the extent such information was previously presented in the 2004 RI Report and/or in the Removal Action plans and reports, such information may be used and should be updated as necessary.

Defining Sources of Contamination

In conducting the Removal Action work, Respondents located the sources of contamination, including the lateral and vertical extent of contamination as determined by sampling at incremental depths on a sampling grid approved by EPA. The physical characteristics and chemical constituents and their concentrations were determined for all known and discovered sources of contamination. The Respondents shall conduct additional sampling, if necessary, to define the boundaries of the contamination to the level established in the QA/QC Plan and DQOs. Areas where contamination was not removed shall be analyzed for the potential of contaminant release (e.g., long term leaching from soil), contaminant mobility and persistence, and characteristics important for evaluating remedial actions, including information necessary to evaluate treatment technologies.

Describing the Nature and Extent of Contamination

The Respondents shall present information from the Removal Action work and this RI to describe the nature and extent of contamination remaining at OU2 as a final step during the field investigation. To describe the nature and extent of remaining contamination, the Respondents shall utilize the information on OU2's physical characteristics and sources of contamination from the Removal Action Work. The Respondents shall then implement an iterative monitoring program and any study program identified in the Work Plan or FOP, using analytical techniques sufficient to detect and quantify the concentration of contaminants and/or migration of contaminants through groundwater or surface water transport at OU2. In addition, if necessary, the Respondents shall gather data for calculations of contaminant fate and transport. EPA shall use the information on the nature and extent of contamination to determine the level of risk presented by OU2. Respondents shall use this information to help to determine aspects of the appropriate Remedial Action Alternatives to be evaluated.

B. Data Analyses

Evaluate OU2 Characteristics

The Respondents shall analyze and evaluate the data to describe: (1) physical and biological characteristics of OU2; (2) remaining contaminant source characteristics ; (3) nature and extent of remaining contamination; and (4) contaminant fate and transport, if any. The information on physical and biological characteristics, source characteristics, and nature and extent of contamination shall be used in the analysis of contaminant fate and transport. The evaluation shall include the actual and potential magnitude of any ongoing releases from OU2 and lateral and vertical spread of contamination as well as mobility and persistence of contaminants. Where modeling is appropriate, such models shall be identified to EPA in a technical memorandum prior to their use. All data and programming, including any proprietary programs, shall be made available to EPA together with a sensitivity analysis. All models shall be approved by EPA prior to their use.

The Respondents shall collect any data identified by EPA as necessary to fill data gaps that EPA determines are present during preparation of the Supplemental Baseline Risk Assessment (see Guidance for Data Usability in Risk Assessment, U.S. EPA. Office of Emergency and Remedial Response, October 1990, OSWER Directive No. 9285.7-05). Also, this evaluation shall provide any information relevant to characteristics of the Site necessary for the development and evaluation of Remedial Action Alternatives and the refinement and identification of ARARs. Analyses of data collected for Site Characterization shall meet the DQOs developed in the QAPP.

C. Data Management Procedures

The Respondents shall consistently document the quality and validity of field and laboratory data compiled during the RI. At a minimum, this documentation shall include the following activities:

Documenting Field Activities

Information gathered during characterization of OU2 shall be consistently documented and adequately recorded by the Respondents in well maintained field logs and laboratory reports. The method(s) of documentation must be specified in the Work Plan Memorandum and/or the FOP. Field logs must be utilized to document observations, calibrations, measurements, and significant events that have occurred during field activities. Laboratory reports must document sample custody, analytical responsibility, analytical results, adherence to prescribed protocols, nonconformity events, corrective measures, and/or data deficiencies.

Maintaining Sample Management and Tracking

The Respondents shall maintain field reports, sample shipment records, analytical results, and QA/QC reports to ensure that only validated analytical data are reported and utilized in the development and evaluation of the Supplemental Baseline Risk Assessments and Remedial Action Alternatives.

D. Site Characterization Deliverables

The Respondents shall prepare the Site Characterization Summary for OU2 and the Remedial Investigation Report.

Site Characterization Summary for OU2.

After completing field sampling and analysis, the Respondents shall prepare a concise Site Characterization Summary for OU2. This summary shall discuss the investigative activities that have taken place and describe and display data for OU2 documenting the location and characteristics of surface and subsurface features and remaining contamination at OU2 including the affected medium, location, types, physical state, and estimated quantity and concentrations of contaminants. In addition, the location, dimensions, physical condition, and varying concentrations of each contaminant throughout each source and the extent of contaminant migration through each of the affected media shall be documented. The Site Characterization Summary for OU2 shall provide EPA with a reference for the identification of any supplemental data requirements, identification of remediation goals, initial development and screening of Remedial Action Alternatives, and the refinement and identification of ARARs.

Remedial Investigation (RI) Report

The Respondents shall prepare and submit a Draft RI Report to EPA for review and approval. This report shall summarize results of field activities to characterize OU2, the nature and extent of remaining contamination, and the fate and transport of remaining contaminants. The Respondents shall refer to the RI/FS Guidance for an outline of the report format and contents. Following comment by EPA, the Respondents shall prepare a Final RI Report which satisfactorily addresses EPA's comments.

E. Reuse Assessment

If EPA determines that a Reuse Assessment is necessary, Respondents will perform such a Reuse Assessment in accordance with EPA guidance, including, but not limited to: "Considering Reasonably Anticipated Future Land Use and Reducing Barriers to Reuse at EPA-lead Superfund Remedial Sites," OSWER Directive 9355.7-19, dated March 17, 2010, or subsequently issued guidance. The Reuse Assessment should provide sufficient information to develop realistic assumptions of the reasonably anticipated future uses for OU2.

F. Project Management

New Site information and new data collected during the Supplemental RI should be managed, evaluated, and reported using an Electronic Data Deliverable (EDD) in the Data Archival and ReTrieval (DART) program following the Environmental Data Submission Guidance (SESDGUID-106-R0). It is envisioned that this system will be the primary tool for storing, evaluating, and reporting all future data collected at OU2. Data is generally defined to include all quantitative, semi-quantitative, and qualitative measurements made at OU2. The system should have the capability to allow the user to easily locate and retrieve data collected at OU2. The system should also allow the user to easily prepare summary tables and figures.

Though the system should have secure access, it should be accessible to EPA and the State and its representatives. Respondents to the Settlement Agreement and their designated representatives should also have access to the data management system. Respondents will not be required to submit copies of or to re-format any reports, records, data, etc. already submitted by Respondents to EPA as part of the Removal Action work.

TASK 4 - TREATABILITY STUDIES

If necessary, Treatability Studies shall be performed by the Respondents to assist in the detailed analysis of alternatives. If applicable, study results and operating conditions will later be used in the detailed design of the selected remedial technology. The following activities shall be performed by the Respondents.

A. Determination of Candidate Technologies and the Need for Treatability Studies

The Respondents shall identify in a technical memorandum, for EPA review and comment, candidate technologies for a Treatability Studies program during project planning (Task 1). The listing of candidate technologies shall cover the range of technologies required for alternatives analysis (Task 6.a.). The specific data requirements for the Treatability Studies program shall be determined and refined during Site Characterization for OU2 and the development and screening of Remedial Action Alternatives (Tasks 3 and 6, respectively).

Conduct Literature Survey and Determine the Need for Treatability Studies

The Respondents shall conduct a literature survey to gather information on performance, relative costs, applicability, removal efficiencies, operation and maintenance (O&M) requirements, and implementability of candidate technologies. If practical candidate technologies have not been sufficiently demonstrated, or cannot be adequately evaluated for OU2 on the basis of available information, Treatability Studies shall be conducted. EPA shall determine whether Treatability Studies will be required.

Evaluate Treatability Studies

Where EPA has determined that Treatability Studies are required, the Respondents and EPA shall decide on the type of Treatability Studies to use (e.g., bench versus pilot). Because of the time required to design, fabricate, and install pilot scale equipment, as well as to perform testing for various operating conditions, the decision to perform pilot testing shall be made as early in the process as possible to minimize potential delays of the FS. To assure that a Treatability Study program is completed on time, and with accurate results, the Respondents shall either submit a separate Treatability Study Work Plan, or an amendment to the original RI/FS Work Plan, for EPA review and approval.

B. Treatability Study Deliverables

In addition to the memorandum identifying candidate technologies, the deliverables that are required when Treatability Studies are to be conducted include a Treatability Study Work Plan or amendment to the original RI/FS Work Plan, a Treatability Study Sampling and Analysis Plan, and a Final Treatability Study Evaluation Report. EPA may also require a Treatability Study Health and Safety Plan, where appropriate.

Treatability Study Work Plan Memorandum

The Respondents shall prepare a Treatability Study Work Plan Memorandum or amendment to the original RI/FS Work Plan for EPA review and approval. This Plan shall describe the background of OU2, remedial technologies to be tested, test objectives, experimental procedures, treatability conditions to be tested, measurements of performance, analytical methods, data management and analysis, health and safety, and

residual waste management. The DQOs for Treatability Studies shall be documented as well. If pilot-scale Treatability Studies are to be performed, the Treatability Study Work Plan shall describe pilot plant installation and start-up, pilot plant operation and maintenance procedures, and operating conditions to be tested. If testing is to be performed off-site, permitting requirements must be addressed.

Treatability Study Sampling and Analysis Plan

If the original QAPP or SAP is not adequate for defining the activities to be performed during the Treatability Studies, a separate Treatability Study SAP or amendment to the original RI/FS SAP shall be prepared by the Respondents for EPA review and approval. It shall be designed to monitor pilot plant performance. Task 1.B. of this Statement of Work provides additional information on the requirements of the SAP.

Treatability Study Health and Safety Plan

If the original RI/FS Health and Safety Plan is not adequate for defining the activities to be performed during the Treatability Studies, a separate or amended Health and Safety Plan shall be developed by the Respondents. Task 1.B. of this Statement of Work provides additional information on the requirements of the Health and Safety Plan. EPA reviews, but does not "approve," the Treatability Study Health and Safety Plan.

Treatability Study Evaluation Report

Following completion of the Treatability Studies, the Respondents shall analyze and interpret the testing results in a technical report to EPA. Depending on the sequence of activities, this report may be a part of the RI/FS Report or a separate deliverable. The report shall evaluate each technology's effectiveness, implementability, cost, and actual results as compared with predicted results. The report shall also evaluate full scale application of the technology, including a sensitivity analysis identifying the key parameters affecting full scale operation.

TASK 5 – SUPPLEMENTAL BASELINE RISK ASSESSMENT

Section 300.430(d)(4) of the National Contingency Plan states that a site-specific BRA will be conducted as part of the RI. The BRA is an analysis of the potential adverse health effects (current and future) caused by hazardous substance releases from a site in the absence of any actions to control or mitigate these releases (i.e., an assumption of no action). This analysis includes identifying and characterizing the toxicity and effects of hazardous substances present, describing contaminant fate and transport, evaluating the potential for human exposure, and assessing the risk of potential impacts or threats on human health. An additional component of the BRA is the Environmental Assessment which assesses the risk of potential impacts or threats to the ecological environment (including both flora and fauna). The BRA provides the basis for

determining whether or not remedial action is necessary at a site and a justification for performing any remedial action that may be required.

The Respondents shall develop the human health portion of the Supplemental BRA for OU2 in accordance with applicable EPA guidance, including but not limited to: "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part A)," (RAGS, EPA-540-1-89-002, OSWER Directive 9285.7-01A, December 1989); "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals)," (RAGS, EPA 540-R-92-003, OSWER Directive 9285.7-01B, December 1991); and "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part D, Standardized Planning, Reporting, and Review of Superfund Risk Assessments)," (RAGS, EPA 540-R-97-033, OSWER Directive 9285.7-01D, January 1998) or subsequently issued guidance. These documents describe and illustrate the process of gathering and assessing human health risk information in addition to developing remediation goals. Other resources that the Respondents must utilize when performing the Baseline Risk Assessment include: EPA's Superfund Exposure Assessment Manual (SEAM), the Integrated Risk Information System (IRIS), the Health Effects Assessment Summary Tables (HEAST), and the Supplemental Region IV Risk Assessment Guidance (3-26-91, and updated). The Respondents shall prepare the Environmental Assessment for OU2 in accordance with applicable EPA guidance, including but not limited to: "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments" (ERAGS, EPA-540-R-97-006, OSWER Directive 9285.7-25, June 1997) or subsequently issued guidance. EPA shall provide other guidance for the human health and Environmental Assessment as necessary during scoping of the work assignment.

A. Scoping

As part of the overall background data review and work plan preparation, the Respondents shall identify chemical-specific ARARs and develop Preliminary Remediation Goals (PRGs) for both human health and ecological exposure pathways.

B. Development of Supplemental Baseline Risk Assessment

During the RI, the Respondents will prepare a Site Characterization Summary Report for OU2, which will contain the validated laboratory data from the Supplemental RI and a summary of the data representing the residual PCB contamination, if any, after completion of the Removal Action. This report shall be used as the preliminary basis for the Supplemental Human Health Risk Assessment and the Environmental Assessment.

1. Supplemental Human Health Risk Assessment

The Human Health Risk Assessment process consists of the four components listed below. During the scoping of the work assignment, the Respondents shall discuss with EPA the format of the Supplemental BRA Report as well as any additional references to be utilized

during the Human Health Risk Assessment. The Supplemental BRA shall address OU2 risks based on current OU2 conditions following completion of the Removal Action and to determine the nature and extent of any remaining risks.

A. Data Collection and Evaluation:

The Respondents shall review the information that is available on the hazardous substances currently present at OU2 and shall identify the chemicals of potential concern (COPCs). The COPCs are not chosen solely on the basis of chemical-specific ARARs. The initial selection shall be based on an evaluation of quantitation limits, qualifiers, blank contamination, and background data, including the data collected during the Removal Action. If necessary, a further reduction of these COPCs can be performed based on the frequency of detection, the concentration of contaminants on-site as compared to PRG levels, and relative toxicity. The Respondent shall submit to EPA for review and approval Technical Memorandum #1 which contains a list of all the hazardous substances currently present at OU2, proposing from this list the COPCs with the known concentrations. This memorandum shall include a discussion of the rationale for the identification of the COPCs. As appropriate, the data shall be tabulated to show the frequency of detection, the arithmetic mean and range of concentrations, and the sample collection date(s). In calculating the arithmetic mean for the data summary table, only samples with detected contamination ("hits") should be used. (Note: The non-detects are included in the mean calculation for the exposure concentration term in the daily intake equation.)

This Technical Memorandum shall be submitted to EPA along with the Site Characterization Summary for OU2. Comments on the Technical Memorandum shall be incorporated into the draft BRA as directed by EPA.

B. Exposure Assessment and Documentation:

The Respondents shall update the actual and potential exposure points and pathways. Exposure assumptions must be supported with data and must be consistent with Agency policy. For each exposure point, the release source, the transport media (e.g., ground water, surface water, air, etc.) and the exposure route (oral, inhalation, dermal) must be clearly delineated. Both present and future risks at OU2 must be considered and weighed, using reasonable maximum exposure (RME) scenarios. The Human Health Evaluation Manual, Part A and the supplemental guidance entitled Standard Default Exposure Factors, OSWER Directive 9285.6-03, should be consulted in development of exposure assumptions. The Respondents shall submit to EPA for review and approval Technical Memorandum #2 describing the exposure scenarios with a description of the assumptions made and the use of data and a figure showing the site conceptual model for OU2. If it is appropriate to use fate and transport models to estimate the exposure concentration at points spatially separate from monitoring points or media not sampled, these models shall

be presented and discussed. Representative data must be utilized and the limitations and uncertainties associated with the models must be documented.

The Exposure Assessment Section in the Supplemental BRA shall contain exposure concentrations typically based on the 95 percent confidence limit on the arithmetic average. The exposure concentration shall be used with the exposure assumptions from the Technical Memorandum to determine chemical-specific intake levels for each exposure scenario. This Technical Memorandum shall be submitted to EPA after the submittal of the Site Characterization Summary for OU2. Comments on the Technical Memorandum shall be incorporated into the draft BRA as directed by EPA.

C. Toxicity Assessment and Documentation:

The Respondents shall utilize the information in IRIS, HEAST, and if needed, other similar databases and other information sources to provide a toxicity assessment of the COPCs. This assessment shall include the types of adverse health and/or environmental effects associated with chemical exposures (including potential carcinogenicity or the toxic effect observed in deriving the Reference Dose (RfD)), the relationships between magnitude of exposures and adverse effects, and the related uncertainties of contaminant toxicity (e.g., the weight of evidence for a chemical's carcinogenicity or the degree of confidence in the RfD). The toxicity information for each chemical derived from IRIS need only be summarized in this section, with a reference to IRIS. The toxicity section shall include tables which summarize the non-carcinogenic RfDs and carcinogenic slope factors for the COPCs. If the dermal exposure route is considered to be complete, this section should also contain toxicity values adjusted to express absorbed doses and the absorption efficiency used to make the adjustment (See Appendix A of guidance).

D. Risk Characterization:

The Respondents shall integrate the chemical-specific intake levels and chemical-specific toxicity values developed during the exposure and toxicity assessments to characterize and quantify the current and potential risks to human health and the environment posed by OU2. The risk relative to chemical-specific ARARs should also be discussed in this section. The risk characterization must identify and discuss the uncertainties associated with contaminants, toxicities, and exposure assumptions.

2. Environmental Assessment

In addition to the human health component of the BRA, the risk to the environment (non-human receptors) from exposure to the contaminants must be addressed. The ecological assessment is comprised of the following four components:

A. Problem Formulation:

The problem formulation stage should include the identification and definition of the objectives and scope of the ecological risk assessment (ERA); identification of the ecological Chemicals of Potential Concern (COPCs) (which involves a weighing of three factors: 1) the comparison of contaminant levels to conservative screening values, 2) frequency of detection, and 3) comparison to appropriate background levels) and providing a summary of their known effects, information concerning the release, migration, and fate of the ecological COPCs, exposure pathways, and potential receptors (including the occurrence of any threatened and endangered species [state or federal] utilizing OU2, or the presence of any of their critical habitat). The definition of source areas, migration pathways, and receptors define the conceptual model. The end product of the conceptual model should be the designation of assessment and measurement endpoints, identification of data needs assessment and measurement endpoints, identification of data needs (identification of the necessary field and/or laboratory studies), etc. Information to be utilized includes the Remedial Investigation, previous Site investigation documents and reports, as well as appropriate reference material, databases, literature, etc., and site reconnaissance. Screening values, or other appropriate conservative levels for contaminants without screening values, should be submitted as Ecological Preliminary Screening Goals.

B. Exposure Assessment:

The Respondents should evaluate the information contained in the Supplemental RI to determine contaminant characterization, and receptor characterization to develop exposure point concentrations for the ecological receptors. Both current and future scenarios should be developed. Problem formulation and exposure assessment information should be submitted to EPA as Technical Memorandum #3, after the submittal of the Site Characterization Summary for OU2. EPA comments should be incorporated into the draft ERA that contains all four sections.

C. Ecological Effects Assessment:

The Respondents shall utilize available resources to expand the preliminary ecological effects profile contained in the conceptual model. The results of any field studies, toxicity tests, etc., conducted during the Supplemental RI should be reported.

D. Risk Characterization:

The Respondents should integrate the exposure assessment and effects assessment to develop the risk characterizations. The uncertainties associated with the Ecological Risk Assessment (ERA) should be outlined in an Uncertainty Section. The ERA contractor

should identify additional data elements which reduce uncertainty associated with the findings of the Ecological Risk Assessment. EPA will identify any elements, if any, which would warrant additional expenditures of resources.

3. Remedial Goal Options

The Supplemental BRA shall include a section which outlines the Remedial Goal Options (RGOs) for the chemicals and media of concern that are protective of human health, the ecology and ground water. This section should include both ARARs and health-based cleanup goals. This section should contain a table with media cleanup levels for each chemical that contributes to a pathway that exceeds a 10^{-4} risk (or whatever risk level is chosen as the remediation trigger by the risk manager) or an HI of 1 or greater or exceeds a state or federal chemical-specific ARAR for each scenario evaluated in the Supplemental BRA. Chemicals need not be included if their individual carcinogenic risk contribution to a pathway is less than 10^{-6} or their noncarcinogenic HQ is less than 0.1. The table should include the 10^{-4} , 10^{-5} , and 10^{-6} risk levels for each chemical, media and scenario (land use) and the HQ 0.1, 1 and 10 levels as well as any chemical-specific ARAR values (state and federal). The values should be developed by combining the exposure levels to each chemical by a receptor from all appropriate routes of exposure (i.e. inhalation, ingestion and dermal) within a pathway and rearranging the site-specific average-dose equations used in the BRA to solve for the concentration term. The resulting table should present one set of RGOs for each media and each land use (e.g., residential (child and adult) and industrial).

The purpose is to provide the RPM with the maximum risk-related media level options on which to develop remediation aspects of the Feasibility Study and Proposed Plan. RAGS Part B is not appropriate for the development of RGOs since site-specific exposure information is available at this stage in the risk assessment process. These site-specific RGOs replace the generic PRGs in providing the final risk-based guidance for remedial action. The results of the ecological risk assessment should be the identification of remediation goals for the ecological COCs that would be protective for the receptors. These remediation goal options should be presented for the relevant environmental media.

C. Report Preparation

The three Technical Memoranda listed above shall form the basis of the Supplemental BRA Report. The report shall be submitted concurrently with the Respondents' Draft Supplemental RI Report.

The Supplemental BRA Report shall include a comprehensive description of the four components of the Human Health Baseline Risk Assessment, and shall follow the principles established in the risk assessment guidance documents. A discussion of sources of uncertainty, data gaps, incomplete toxicity information, and modeling characteristics must be included. The Respondent shall refer to page 9-4 of the Human Health Evaluation manual for an outline of the

report format. The Supplemental BRA shall include an environmental assessment which evaluates the environmental risk posed by OU2 contaminants of concern. All tables in the Technical Memoranda and the Supplemental BRA Report shall be submitted in a format as specified by EPA. The report shall be revised, as necessary, based on EPA's comments and submitted to EPA for approval.

TASK 6 - DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES

The development and screening of Remedial Action Alternatives is performed to select an appropriate range of response options to be evaluated. This range of options shall include, at a minimum, alternatives that involve containment and treatment components; alternatives that involve containment with little or no treatment; and a no-action alternative. As provided in 40 C.F.R. §§ 300.415(d) and (g), the Remedial Action alternatives should follow from and be consistent with the response actions taken pursuant to the Removal Action.

The following activities shall be performed by the Respondents as a function of the development and screening of Remedial Action Alternatives.

A. Development and Screening of Remedial Action Alternatives

The Respondents shall begin to develop and evaluate concurrently with the RI Site Characterization task, a range of appropriate options that, at a minimum, ensure protection of human health and the environment and comply with all ARARs.

Refine and Document Remedial Action Objectives

The Respondents shall review and, if necessary, propose refinement of the Site Objectives and preliminary remedial action objectives for OU2 that were established during the Scoping phase (Task 1). Any revised Site Objectives or revised remedial action objectives shall be documented in a technical memorandum as discussed in Task 1.A. These objectives shall specify the contaminants and media of interest, exposure pathways and receptors, an acceptable contaminant level or range of levels (at particular locations for each exposure route), and options for engineering controls and institutional controls.

Develop General Response Actions

The Respondents shall develop general response actions for each medium of interest defining containment, treatment, excavation, pumping, or other actions, singly or in combination, to satisfy the remedial action objectives.

Identify Areas and Volumes of Media

The Respondents shall identify areas and volumes of media to which general response actions may apply, taking into account requirements for protectiveness as identified in the remedial action objectives. The chemical and physical characterization of OU2 and the Baseline Risk Assessment and remediation goals shall also be taken into account.

Identify, Screen, and Document Remedial Technologies

The Respondents shall identify and evaluate technologies applicable to each general response action to eliminate those that cannot be implemented at OU2. General response actions shall be refined to specify remedial technology types. Technology process options for each of the technology types shall be identified either concurrently with the identification of technology types or following the screening of the considered technology types. Process options shall be evaluated on the basis of effectiveness, implementability, and cost factors to select and retain one or, if necessary, more representative processes for each technology type. The technology types and process options shall be summarized for inclusion in a technical memorandum. The reasons for eliminating alternatives must be specified.

Assemble and Document Alternatives

The Respondents shall assemble selected representative technologies into alternatives for each affected medium. Together, all of the alternatives shall represent a range of treatment and containment combinations that shall address the operable unit as a whole. A summary of the assembled alternatives and their related action-specific ARARs shall be prepared by the Respondents for inclusion in a technical memorandum. The reasons for eliminating alternatives during the preliminary screening process must be specified.

Refine Alternatives

The Respondents shall refine the Remedial Action Alternatives to identify contaminant volumes to be addressed by the proposed process and sizing of critical unit operations as necessary. Sufficient information shall be collected for an adequate comparison of alternatives. Remedial action objectives for each medium shall also be refined as necessary to incorporate any new risk assessment information presented in the Supplemental BRA Report. Additionally, action-specific ARARs shall be updated as the Remedial Action Alternatives are refined.

Conduct and Document Screening Evaluation of Each Alternative

The Respondents may perform a final screening process based on short- and long-term aspects of effectiveness, implementability, and relative cost. Note that the evaluation of effectiveness involves evaluating the long-term and short-term risks, among other factors,

associated with a remedial alternative. Generally, this screening process is only necessary when there are many feasible alternatives available for detailed analysis. If necessary, the screening of alternatives shall be conducted to assure that only the alternatives with the most favorable composite evaluation of all factors are retained for further analysis.

As appropriate, the screening shall preserve the range of treatment and containment alternatives that was initially developed. The range of remaining alternatives shall include options that use treatment technologies and permanent solutions to the maximum extent practicable. The Respondents shall prepare a technical memorandum summarizing the results and reasoning employed in screening, arraying alternatives that remain after screening, and identifying the action-specific ARARs for the alternatives that remain after screening.

B. Alternatives Development and Screening Deliverables

The Respondents shall prepare a technical memorandum summarizing the work performed and the results of each task above, including an alternatives array summary. This alternatives array shall be modified by the Respondents when conducting Task 7 if required by EPA's comments to assure identification of a complete and appropriate range of viable alternatives to be considered in the detailed analysis. This deliverable shall document the methods, rationale, and results of the alternatives screening process.

TASK 7 - DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES

The detailed analysis shall be conducted by the Respondents to provide EPA with the information needed to allow for the selection of a remedy for OU2.

A. Detailed Analysis of Alternatives

The Respondents shall conduct a detailed analysis of remaining alternatives. This analysis shall consist of an assessment of each option against a set of nine evaluation criteria and a comparative review of all options using the same nine evaluation criteria as a basis for comparison. The Respondents' analysis shall also include an assessment of the specific types of Institutional Controls being considered, including an evaluation of each option against the nine evaluation criteria.

Apply Nine Criteria and Document Analysis

The Respondents shall apply nine evaluation criteria to the assembled Remedial Action Alternatives to ensure that the selected Remedial Action Alternative will be protective of human health and the environment; will be in compliance with, or include a waiver of, ARARs; will be cost-effective; will utilize permanent solutions and alternative treatment technologies, or resource recovery technologies, to the maximum extent practicable; and

will address the statutory preference for treatment as a principal element. The evaluation criteria include: (1) overall protection of human health and the environment; (2) compliance with ARARs; (3) long-term effectiveness and permanence; (4) reduction of toxicity, mobility, or volume; (5) short-term effectiveness; (6) implementability; (7) cost; (8) State acceptance; and (9) community acceptance. Criteria 8 and 9 are considered after the RI/FS Report has been released to the general public. For each alternative, the Respondents shall provide: (1) a description of the alternative that outlines the strategy involved and identifies the key ARARs associated with each alternative; and (2) a discussion of the individual criterion assessment.

Compare Alternatives Against Each Other and Document the Comparison of Alternatives

The Respondents shall perform a comparative analysis among the Remedial Action Alternatives. That is, each alternative shall be compared against the others using the nine evaluation criteria as a basis of comparison. No alternative shall be identified by the Respondents as the preferred alternative in the Focused Feasibility Study. Identification and selection of the preferred alternative is conducted by EPA.

B. Detailed Analysis Deliverables

Report on Comparative Analysis and Presentation to EPA

Respondents shall submit a report on comparative analysis to EPA and present to EPA a summary of the findings of the remedial investigation and remedial action objectives, and present the results of the nine criteria evaluation and comparative analysis, as described in the SOW.

Alternatives Analysis for Institutional Controls and Screening

Respondents shall submit a memorandum on the Institutional Controls identified in the Technical Memorandum on Remedial Technologies, Alternatives, and Screening as potential remedial actions. The Alternatives Analysis for Institutional Controls and Screening shall (i) state the objectives (i.e., what will be accomplished) for the Institutional Controls; (ii) determine the specific types of Institutional Controls that can be used to meet the remedial action objectives; (iii) investigate when the Institutional Controls need to be implemented and/or secured and how long they must be in place; (iv) research, discuss, and document any agreement with the proper entities (e.g., state, local government entities, local landowners, conservation organizations, Respondents) on exactly who will be responsible for securing, maintaining, and enforcing the Institutional Controls. The Alternatives Analysis for Institutional Controls and Screening shall also evaluate the Institutional Controls identified in the Technical Memorandum on Remedial Technologies, Alternatives, and Screening against the nine evaluation criteria outlined in the NCP (40 C.F.R. § 300.430(e)(9)(iii)) for CERCLA cleanups, including but not limited to costs to implement, monitor, and/or enforce the Institutional Controls. The

Alternatives Analysis for Institutional Controls and Screening shall be submitted as an appendix to the Draft Feasibility Study Report.

Focused Feasibility Study Report

The Respondents shall prepare a Draft Focused FS Report for EPA review and comment. This report, as ultimately adopted or amended by EPA, provides a basis for remedy selection by EPA and documents the development and analysis of Remedial Action Alternatives. The Respondents shall refer to the RI/FS Guidance for an outline of the report format and the required report content. The Respondents shall prepare a Final Focused FS Report which satisfactorily addresses EPA's comments. Once EPA's comments have been addressed by the Respondents to EPA's satisfaction and EPA approval has been obtained or an amendment has been furnished by EPA, the Focused Final FS Report may be bound with the Final Supplemental RI Report.

ATTACHMENT A

REFERENCES

The following list, although not comprehensive, comprises many of the regulations and guidance documents that apply to the RI/FS process:

1. The National Oil and Hazardous Substances Pollution Contingency Plan, March 8, 1990.
2. "Guidance for Conducting Remedial Investigations and Feasibility Studies Under CERCLA, Interim Final," U.S. EPA, Office of Emergency and Remedial Response, October 1988. OSWER Directive No. 9355.3-01.
3. "Interim Guidance on Potentially Responsible Party Participation in Remedial Investigation and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, Appendix A to OSWER Directive No. 9355.3-01.
4. "Guidance on Oversight of Potentially Responsible Party Remedial Investigations and Feasibility Studies," U.S. EPA, Office of Waste Programs Enforcement, OSWER Directive No. 9835.3.
5. "A Compendium of Superfund Field Operations Methods," Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987. OSWER Directive No. 9355.0-14.
6. "EPA NEIC Policies and Procedures Manual," May 1978, revised November 1984, EPA-330/9-78-001-R.
7. "Data Quality Objectives for Remedial Response Activities," U.S. EPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
8. "Guidelines and Specifications for Preparing Quality Assurance Project Plans," U.S. EPA, Office of Research and Development, Cincinnati, OH, QAMS-004/80, December 29, 1980.
9. "Interim Guidelines and Specifications for Preparing Quality Assurance Project Plans,"
10. U.S. EPA, Office of Emergency and Remedial Response, QAMS-005/80, December 1980.
11. "Users Guide to the EPA Contract Laboratory Program," U.S. EPA, Sample Management Office, December 1986.

12. "Interim Guidance on Compliance with Applicable or Relevant and Appropriate Requirements." U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.
13. "CERCLA Compliance with Other Laws Manual," Two Volumes. U.S. EPA, Office of Emergency and Remedial Response, August 1988 (Draft), OSWER Directive No. 9234.1-01 and-02.
14. "Guidance on Remedial Actions for Contaminated Ground Water at Superfund Sites."
15. U.S. EPA, Office of Emergency and Remedial Response, (Draft). OSWER Directive No. 9283.1-2.
16. "Draft Guidance on Preparing Superfund Decision Documents," U.S. EPA, Office of Emergency and Remedial Response, March 1988, OSWER Directive No. 9355.3-02
17. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part A," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002A, December 1989, OSWER Directive No. 9285.7-01a.
18. "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part B, Development of Risk-based Preliminary Remediation Goals)," (RAGS, EPA 540-R-92-003, OSWER Directive 9285.7-01B, December 1991).
19. "Interim Final Risk Assessment Guidance for Superfund - Volume I - Human Health Evaluation Manual, Part C," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-89/002C, OSWER Directive No. 9285.7-01c.
20. "Ecological Risk Assessment Guidance for Superfund: Process for Designing and Conducting Ecological Risk Assessments" (ERAGS, EPA-540-R-97-006, OSWER Directive 9285.7-25, June 1997).
21. "Superfund Exposure Assessment Manual." U.S. EPA, Office of Emergency and Remedial Response, EPA/540/1-88/001, April 1988, OSWER Directive No. 9285.5-1.
22. "Guidance for Data Usability in Risk Assessment," U.S. EPA, Office of Emergency and Remedial Response, EPA/540/G-90/008, October 1990, OSWER Directive No. 9285.7-05.
23. "Role of the Baseline Risk Assessment in Superfund Remedy Selection Decisions," April 22, 1991, OSWER Directive No. 9355.0-30.
24. "Health and Safety Requirements of Employees Employed in Field Activities." U.S. EPA, Office of Emergency and Remedial Response, July 12, 1981, EPA Order No. 1440.2.

25. OSHA Regulations in 29 CFR 1910.120 (Federal Register 45654, December 19, 1986).
26. "Interim Guidance on Administrative Records for Selection of CERCLA Response Actions." U.S. EPA. Office of Waste Programs Enforcement, March 1, 1989, OSWER Directive No. 9833.3A.
27. "Community Relations in Superfund: A Handbook." U.S. EPA. Office of Emergency and Remedial Response, June 1988, OSWER Directive No. 9230.0-3B.
28. "Community Relations During Enforcement Activities and Development of the Administrative Record." U.S. EPA. Office of Waste Programs Enforcement, November 1988, OSWER Directive No. 9836.0-1 A.
29. "USEPA Contract Laboratory Program Statement of Work for Organic Analysis." U.S. EPA, Office of Emergency and Remedial Response, February 1988.
30. "USEPA Contract Laboratory Program Statement of Work for Inorganic Analysis." U.S. EPA, Office of Emergency and Remedial Response, July 1988.
31. "Guidance for Data Useability in Risk Assessment" (OSWER Directive #9285.7-09A, April 1992).
32. "EPA Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/600/R-02/009, December 2002).
33. EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992).
34. "Interim Final Risk Assessment Guidance for Superfund, Volume I - Human Health Evaluation Manual (Part D. Standardized Planning, Reporting, and Review of Superfund Risk Assessments)." (RAGS, EPA 540-R-97-033, OSWER Directive 9285.7-01D, January 1998).

ATTACHMENT B

SUMMARY OF THE MAJOR DELIVERABLES SUPPLEMENTAL RI/FOCUSED FS AND SUPPLEMENTAL RISK ASSESSMENT

<u>Task</u>	<u>Deliverable</u>	<u>EPA Response</u>
TASK 1 – SCOPING		
	Supplemental RI/ Focused FS Work Plan	Review and Approve
	Field Sampling and Analysis Plan	Review and Approve
	Quality Assurance Project Plan	Review and Approve
	Site Health and Safety Plan	Review and Comment
TASK 3 – SITE CHARACTERIZATION		
	Technical Memorandum on Contaminant Fate and Transport Modeling (where appropriate)	Review and Approve
	Site Characterization Summary For OU2	Review and Comment
	Supplemental Remedial Investigation (RI)	Review and Approve
TASK 4 – TREATABILITY STUDY		
	Technical Memorandum Identifying Candidate Technologies	Review and Comment

<u>Task</u>	<u>Deliverable</u>	<u>EPA Response</u>
	Treatability Study Work Plan (or amendment to original Work Plan)	Review and Approve
	Treatability Study SAP (or amendment to original SAP)	Review and Approve
	Treatability Study Evaluation Report	Review and Approve

TASK 5 – SUPPLEMENTAL BASELINE RISK ASSESSMENT

Technical Memorandum #1: ARARs and COCs	Review and Comment
Technical Memorandum #2: Exposure scenarios and Assumptions	Review and Comment
Technical Memorandum #3: Environmental Evaluation Report	Review and Comment
Draft Supplemental BRA	Review and Comment
Final Supplemental BRA	Review and Approve

TASK 6 - DEVELOPMENT AND SCREENING OF REMEDIAL ACTION ALTERNATIVES

Technical Memorandum Documenting Revised Remedial Action Objectives	Review and Approve
Technical Memorandum on Remedial Technologies, Alternatives, and Screening	Review and Comment

Task

Deliverable

EPA Response

TASK 7 - DETAILED ANALYSIS OF REMEDIAL ACTION ALTERNATIVES

Report on Comparative
Analysis

Review and Comment

Alternatives Analysis for
Institutional Controls and
Screening

Review and Comment

Focused Feasibility Study
Report

Review and Approve

ATTACHMENT C

GENERAL SCHEDULE FOR MAJOR DELIEVERABLES RI/FS AND RISK ASSESSMENT

<u>ACTIVITY</u>	<u>SCHEDULE DATE (DAYS)</u>
AOC Effective Date	X
Draft Supplemental RI/Focused FS Work Plan ("Work Plan") and Associated Documents Submitted	X+45
Final Work Plan and Associated Documents Submitted	30 days after receipt of EPA's comments on Draft Work Plan
Initiate Fieldwork	Per schedule in approved Work Plan
Fieldwork Complete	Per schedule in approved Work Plan
Site Characterization Summary for OU2 Submitted	120 days after completion of field work
Draft Supplemental RI Submitted	90 days after receipt of EPA comments on Site Characterization Summary for OU2, Technical Memorandum #1, Technical Memorandum #2, and Technical Memorandum #3
Final Supplemental RI Submitted	45 days after receipt of EPA comments on draft Supplemental RI
Draft Focused FS and Draft Treatability Study Report Submitted	180 days after final Supplemental RI Report approved
Final Focused FS and Final Treatability Study Report Submitted	45 days after receipt of EPA comments on draft Focused FS

Schedule of Supplemental BRA
Deliverables

DELIVERABLE	DEADLINE
Technical Memorandum #1: ARARs and COCs	Concurrent with submittal of Site Characterization Summary for OU2
Technical Memorandum #2: Exposure scenarios and assumptions	14 days after submittal of Site Characterization Summary for OU2
Technical Memorandum #3: Environmental evaluation Report	14 days after submittal of Site Characterization Summary for OU2
Draft Supplemental BRA	Concurrent with submittal of draft Supplemental RI Report
Final Supplemental BRA	21 days after receipt of EPA comments

Note: Other deliverables listed in Attachment B shall also be incorporated into the schedule to be submitted as part of the RI/FS Work Plan.